According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or mixture:

Product name : ARIGI UV K3 CYAN INK

MSDS Number : 000001013999

1.2 Use of the substance/mixture:

Use of the : Printer ink

Substance/Preparation

1.3 Company/undertaking identification

Agfa Corporation 611 River Drive Center 3

Elmwood Park, NJ 07407

U.S.A.

Transport Emergency Non-transportation

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS (Globally Harmonized Syste	GHS (Globally Harmonized System of Classification and Labelling of Chemicals)				
Hazard classes	Skin irritation				
Hazard categories	Category 2				
Hazard statements	H315				
Hazard classes	Serious eye damage				
Hazard categories	Category 1				
Hazard statements	H318				
Hazard classes	Skin sensitizer				
Hazard categories	Category 1				
Hazard statements	H317				
Hazard classes	Specific target organ toxicity - repeated exposure				
Hazard categories	Category 1				
Hazard statements	H372				

2.2 Label elements:

Hazardous components which must be listed on the label:

Symbol(s)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015





GHS07



Hazard statements : H315

Causes skin irritation.

H317

May cause an allergic skin reaction. Causes serious eye damage. H318

H372

Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of

exposure cause the hazard).

Precautionary statements: prevention

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P264 Wash ... thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face P280

protection.

P272 Contaminated work clothing should not be allowed out of the

workplace.

Precautionary statements:

response

P302+P352

IF ON SKIN: Wash with plenty of water/...

If skin irritation or rash occurs: Get medical advice/attention. P333+P313 Take off contaminated clothing. P362

Wash contaminated clothing before reuse. P363

P305+P351+P

338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove.

Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/... Get medical advice/attention if you feel unwell. P314

Precautionary statements:

disposal

P501NA

Dispose of contents / container to an approved waste

disposal facility.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Printer ink, mainly consisting of:

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

REG NOAM 2/22 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

Hazardous components

• 2-(2-Vinyloxyethoxy) ethyl acrylate Concentration [%]: 40.00 - 60.00

CAS-No. : 86273-46-3

Hazard classes : Acute toxicity Oral, Skin sensitizer, Chronic hazards to the aquatic

environment

Hazard categories : Category 4, Category 1, Category 3

Hazard statements : H302, H317, H412

• N-vinyl caprolactam Concentration [%]: 10.00 - 20.00

CAS-No. : 2235-00-9

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer, Specific

target organ toxicity - repeated exposure Inhalation

Hazard categories : Category 4, Category 2, Category 1B, Category 1

Hazard statements : H302, H319, H317, H372

CAS-No. : 57472-68-1

Hazard classes : Skin irritation, Serious eye damage, Skin sensitizer

Hazard categories : Category 2, Category 1, Category 1

Hazard statements : H315, H318, H317

• 2-Propenoic acid ,1-6-hexanediyl Concentration [%]: 5.00 - 10.00

ester, polymer with 2-aminoethanol

CAS-No. : 67906-98-3

Hazard classes : Skin irritation, Serious eye irritation

Hazard categories : Category 2, Category 2

Hazard statements : H315, H319

• Isodecyl acrylate Concentration [%]: 5.00 - 10.00

CAS-No. : 1330-61-6

Hazard classes : Serious eye irritation, Specific target organ toxicity - single

exposure, Skin irritation, Chronic hazards to the aquatic

environment

Hazard categories : Category 2, Category 3, Category 2

Hazard statements : H319, H335, H315, H411

• Phosphine oxide, diphenyl(2,4,6- Concentration [%]: 1.00 - 3.00

trimethylbenzoyl)-

CAS-No. : 75980-60-8

Hazard classes : Toxic to reproduction, Chronic hazards to the aquatic environment,

Skin sensitizer

Hazard categories : Category 2, Category 2, Category 1

Hazard statements : H361f, H411, H317

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine Concentration [%]: 1.00 - 5.00

oxide

CAS-No. : 162881-26-7

Hazard classes : Skin sensitizer, Chronic hazards to the aquatic environment

Hazard categories : Category 1A, Category 4

Hazard statements : H317, H413

REG_NOAM 3/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Caprolactam
 Concentration [%]:
 0.10 0.50

CAS-No. : 105-60-2

Hazard classes : Acute toxicity Oral, Acute toxicity Inhalation, Serious eye irritation,

Specific target organ toxicity - single exposure Inhalation, Skin

irritation

Hazard categories : Category 4, Category 2, Category 3, Category 2

Hazard statements : Gategory 4, Category 4

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol Concentration [%]: 0.01 - 0.05

CAS-No. : 128-37-0

Hazard classes : Acute hazards to the aquatic environment, Chronic hazards to the

aquatic environment

Hazard categories : Category 1, Category 1

Hazard statements : H400, H410

• mequinol; 4-methoxyphenol; hydroquinone Concentration [%]: 0.01 - 0.05

monomethyl ether

CAS-No. : 150-76-5

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer

Hazard categories : Category 4, Category 2, Category 1

Hazard statements : H302, H319, H317

• Cupferron Al Concentration [%]: 0.01 - 0.05

CAS-No. : 15305-07-4

Hazard classes : Germ cell mutagenicity

Hazard categories : Category 2 Hazard statements : H341

Components with a community workplace exposure limit

Caprolactam

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

• meguinol; 4-methoxyphenol; hydroguinone monomethyl ether

Cupferron Al

M-factor

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol
 Acute hazards to the aquatic environment
 Chronic hazards to the aquatic environment

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

Eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and

consult a physician.

Skin contact : Immediately flush with plenty of water for at least 15 minutes while

REG_NOAM 4/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

removing contaminated clothing and shoes.

Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary.

Do not induce vomiting.

Inhalation : Take patient to fresh air if necessary. Consult a physician if

necessary.

4.2 Most important symptoms and effects:

Symptoms : Upon contact with skin: redness, pain. In case of eye contact:

redness and pain. Ingestion can cause nausea, vomiting and

diarrhea. May cause headache and dizziness.

4.3 Indication of immediate medical attention and special treatment needed:

General advice : Call a physician immediately.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam., Carbon dioxide (CO2)., Dry extinguishing

powder., Water.

Extinguishing media which

must not be used for safety

reasons

: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Specific hazards during fire

fighting

: Do not use a solid water stream as it may scatter and spread fire.

Further information : Collect contaminated fire extinguishing water separately. This must

not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment

for fire-fighters

: Firefighters should be equipped with self-contained breathing

apparatus to protect against potentially toxic and irritating fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions : Cleanup personnel must use appropriate personal protective

equipment.

Additional advice : Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions : The product should not be allowed to enter drains, water courses or

the soil.

REG_NOAM 5/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015

6.3 Methods and material for containment and cleaning up:

Methods for cleaning up : Dike the spill if necessary. If spill occurs, apply a suitable absorbent

material and collect into an impervious waste container. Collect the

product in a plastic vessel. Carefully collect leftovers.

6.4 Reference to other sections:

For waste disposal see section 13. For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

: Prevent product from diffusing. Advice on safe handling

Hygiene measures : Employees should wash their hands and face before eating,

drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and

eve wash stations should be available.

Advice on protection against

fire and explosion

: No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage

areas and containers

: Keep container tightly closed. Keep in a dry place.

conditions

Further information on storage : Keep container in a well-ventilated place.

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values (US)

CAS-No.: 105-60-2 Caprolactam

Basis	Revision Date	Value Type
OSHA Z1A	1989	1 mg/m3 TWA

REG NOAM	6/22	EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

CAS-No.: 150-76-5

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

OSHA Z1A	1989	20 mg/m3	TWA		
OSHA Z1A	1989	5 ppm 40 mg/m3	STEL		
		10 ppm			
OSHA Z1A	1989	3 mg/m3	STEL		
ACGIH	01 2005	5 mg/m3	TWA		
ACGIH	01 2005	5 mg/m3	TWA		
TN OEL	06 2008	20 mg/m3	TWA		
		5 ppm			
TN OEL	06 2008	1 mg/m3	TWA		
TN OEL	06 2008	40 mg/m3	STEL		
		10 ppm			
TN OEL	06 2008	3 mg/m3	STEL		

2,6-bis(1,	1-dimethylethyl)-	CAS-No.: 128-37-0		
Basis	Revision Date	Value	Туре	
NIOSH ACGIH ACGIH TN OEL US CA OEL	06 1997 01 2005 01 2005 06 2008 02 2012	10 mg/m3 2 mg/m3 2 mg/m3 10 mg/m3 10 mg/m3	TWA TWA	

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

011101				
Basis	Revision	Value	Туре	
	Date			
ACGIH	2004	5 mg/m3	TWA	
NIOSH	06 1997	5 mg/m3	REL	
TN OEL	06 2008	5 mg/m3	TWA	

 Cupferron Al CAS-No.: 15305-07-4

Basis	Revision Date	Value	Туре
ACGIH	03 2014	1 mg/m3	TWA

Air limit values (CA)

Caprolactam CAS-No.: 105-60-2

Basis	Revision Date	Value	Туре
CAD BC OEL	12 2005	1 mg/m3	TWA
CAD BC OEL	12 2005	3 mg/m3	STEL
CAD ON	04 2005	5 mg/m3	TWAEV

REG_NOAM 7/22 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

CAS-No.: 150-76-5

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

OEL (QUE) 12 2 OEL (QUE) 12 2 OEL (QUE) 12 2 CAD AB OEL 07 2 CAD SK OEL 05 2 CAD SK OEL 05 2	2008 23 mg/m3 2008 46 mg/m3 2008 3 mg/m3 2009 5 mg/m3 2009 5 mg/m3	STEL STEL TWA 8 HR ACL 15 MIN ACL
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• 2,6-bis(1,	1-dimethylethyl)-	CAS-No.: 128-37-0		
Basis	Revision	Value	Туре	
	Date			
CAD AB OEL	10 2003	10 mg/m3	TWA	
CAD BC	08 2004	2 mg/m3	TWA	
OEL		_		
CAD BC	08 2004	2 mg/m3	TWA	
OEL				
OEL (QUE)	12 2008	10 mg/m3	TWA	
CAD SK OEL	05 2009	2 mg/m3	8 HR ACL	
CAD SK OEL	05 2009	4 mg/m3	15 MIN ACL	
CAD MB	03 2011	2 mg/m3	TWA	
OEL				
CAD ON	11 2010	2 mg/m3	TWAEV	
OEL				

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Basis	Revision	Value	Туре
	Date		
CAD AB OEL	01 1997	5 mg/m3	TWA
CAD BC	01 1997	5 mg/m3	TWA
OEL			
CAD ON	09 2000	5 mg/m3	TWAEV
OEL			
OEL (QUE)	12 2008	5 mg/m3	TWA
CAD SK OEL	05 2009	5 mg/m3	8 HR ACL
CAD SK OEL	05 2009	10 mg/m3	15 MIN ACL
CAD MB	03 2011	5 mg/m3	TWA
OEL		ŭ	

• Cupferron Al CAS-No.: 15305-07-4

Basis	Revision Date	Value	Туре
CAD BC OEL	05 2013	1 mg/m3	TWA

REG_NOAM 8/22 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

CAD MB	03 2014	1 mg/m3	TWA
OEL CAD ON	11 2010	1 mg/m3	TWAEV
OEL CAD SK OEL	05 2009	10 ma/m3	8 HR ACL
CAD SK OEL	05 2009		15 MIN ACL

Biological limit values (US)

We are not aware of any national exposure limit.

Biological limit values (CA)

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

8.2 Exposure controls:

Occupational exposure controls:

> Instruction measures to prevent exposure:

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

> Technical measures to prevent exposure:

Ensure adequate ventilation.

> Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not

required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard

Z94.4-02.

Hand protection : Use chemical resistant gloves. In case of prolonged immersion or

frequently repeated contact use gloves made of the materials: butylrubber (thickness >= 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard

EN374.

Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these

properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of

types of use are prescribed by the manufacturer.

Eye protection : Safety goggles. EN 166.

Body Protection : Safety clothes : long sleeved clothing EN13688

REG_NOAM 9/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Personal protective

equipment

: Educate and train employees in the safe use and handling of this

product. Emergency showers and eye wash stations should be

available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:

State of matter : Liquid Form : Liquid. Color : Cyan

Odor : Sweetish smell
Odor threshold : No data available

9.1.2 Important health, safety and environmental information:

pH : Not applicable

Melting point/range : < 0 °C Method: Literature.

Boiling point/range : > 100 °C Method: Literature.

Flash point : > 100 °C Method: Literature.

Autoignition temperature : No data available Vapour pressure : No data available Relative vapour density : No data available

Relative density : 1.038 Method: Literature.

Density : No data available
Solubility/qualitative : Immiscible with water.
Water solubility : No data available
Partition coefficient (n- : No data available

octanol/water)

Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Lower explosion limit : No data available
Upper explosion limit : No data available
Evaporation rate : No data available

Flammability (solid, gas) : Not flammable. Method: Literature.

9.2 Other information:

VOC content : 2.1 g/l

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity : Reactivity is not to be expected under normal conditions of

temperature and pressure.

REG_NOAM 10/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

10.2 Chemical stability:

Stability : The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:

Hazardous reactions : The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:

Conditions to avoid : No data available

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition

products

: No specified dangerous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics, metabolism and distribution:

No data available

Acute effects (toxicity tests):

> Acute Toxicity

2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect dose	Species	Value	Method	
Acute oral toxicity	LD50	rat	1,790 mg/kg	OECD Test Guideline 401	
Acute oral toxicity	LD50	rat	2,026 mg/kg	OECD Test Guideline 401	
	Based on av	ailable data,	the classification criteria	are not met.	
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline 402	
	Based on available data, the classification criteria are not met.				
Acute inhalation toxicity	LC50	rat	5.82 mg/l/ 4 h	OECD Test Guideline 403	

N-vinyl caprolactam

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	ca. 1,400 mg/kg	Literature.

REG_NOAM 11/22	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	Literature.		
	Based on a	vailable da	ita, the classification criteria	are not met.		
Acute inhalation toxicity	LC50	rat				
•	It was demonstrated that during intended and foreseen applications, no					
	respirable aerosol is formed.					

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect dose	Species	Value Method	
Acute oral toxicity	LD50	rat	4,600 mg/kg Literature.	
	Based on available data, the classification criteria are not met.			
Acute dermal toxicity	LD 50	Rabbit	> 2,000 mg/kg	
Acute inhalation toxicity	LC 0	Rat	0.41 mg/l/ 7 h	
	Vapor		-	

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

Isodecyl acrylate

	Effect dose	Species	Value Method
Acute oral toxicity	LD 50	Rat	+/- 4,435 mg/kg
Acute dermal toxicity	LD 50	Rabbit	7,522 mg/kg
Acute inhalation toxicity	LC 50 Vapor	Rat	> 1.19 mg/l/8 h

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg Literature.
	Based on av	ailable data,	the classification criteria are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg Literature.
	Based on av	ailable data,	the classification criteria are not met.
Acute inhalation toxicity			
,	No data avai	lable	

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				401
	Based on av	ailable data,	the classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
-				402
	Based on av	ailable data,	the classification criteria	are not met.
Acute inhalation toxicity				
-	No data avai	lable		

REG_NOAM	12/22	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Caprolactam

•	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,475 mg/kg	Directive 92/32/EEC, Annex V, B.1.
	Harmful by ir	halation and if	swallowed.	
Acute oral toxicity	LD50	rat	1,876 mg/kg	Directive 92/32/EEC, Annex V, B.1.
	Harmful by ir	halation and if	swallowed.	
Acute dermal toxicity	LD50 Harmful in co	rabbit ontact with skin	1,440 mg/kg n.	Literature.
Acute inhalation toxicity	LC50	rat	8.16 mg/l/ 4 h	OECD Test Guideline 403
	Harmful by ir	nhalation.		

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rabbit	6,000 mg/kg	OECD Test Guideline
				401
	Based on ava	ailable data	, the classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on ava	ailable data	, the classification criteria	are not met.
Acute inhalation toxicity				
	No data avai	lable		

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

	Effect dose	Species	Value I	Method
Acute oral toxicity	LD50	rat	1,600 mg/kg	Literature.
Acute dermal toxicity		rat	> 2,000 mg/kg	OECD N° 423
	Based on av	ailable data	, the classification criteria a	re not met.
Acute inhalation toxicity				
·	No data avai	lable		

Cupferron Al

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

> Specific target organ toxicity (STOT):

Specific effects	Affected organs
Based on available data, the classification criteria are not met.	

> Irritant and corrosive effects:

REG_NOAM	13/22	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

	Exposure time	Species	Evaluation	Method	
Primary irritation to the skin					
	Irritating to	skin.			
Irritation to eyes					
	Risk of seri	ous damage	to eyes.		

> Irritation to the respiratory tract:

Based on available data, the classification criteria are not met.

> Sensitisation:

Species	Evaluation	Method
	May cause sensitization of susceptib	le persons by skin contact.

> Aspiration hazard:

No data available

Sub-acute, sub-chronic and chronic toxicity

> Repeated dose toxicity:

No data available

> Specific target organ toxicity (STOT):

May cause damage to organs through prolonged or repeated exposure.

> CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

- Carcinogenicity

Based on available data, the classification criteria are not met.

- Mutagenicity

Based on available data, the classification criteria are not met.

- Genetic toxicity in vitro

No data available

- Genetic toxicity in vivo

No data available

- Teratogenicity

Based on available data, the classification criteria are not met.

REG_NOAM 14/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

- Toxicity to reproduction

Based on available data, the classification criteria are not met.

Summarised evaluation of the CMR properties:

Carcinogenicity : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Teratogenicity : Based on available data, the classification criteria are not met.

Toxicity to reproduction : Based on available data, the classification criteria are not met.

Experiences made in practice:

• 2-(2-Vinyloxyethoxy) ethyl acrylate

May be harmful by inhalation, ingestion, skin adsorption.

N-vinyl caprolactam

For industrial applications, there are no data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

No data available

Isodecyl acrylate

No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Suspected of damaging fertility or the unborn child.

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Inhalation of aerosol or skin contact may cause sensitisation of susceptible persons.

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

May cause eye irritation with susceptible persons. May cause irritation of respiratory tract.

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

No data available

Cupferron Al

No data available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

• 2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect dose	Exposure time	Species	Value
Toxicity to fish	LC50 Method:	96 h OECD Test	Brachidanio rerio (zebra fish) Guideline 203	6.8 mg/l

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to fish	NOEC 96 h	Brachidanio rerio (zebra fish)	2.2 mg/l
TOXICITY TO HISTI	Method: OECD Te	` ,	2.2 mg/i
Toxicity to fish	LC100 96 h		10 mg/l
I TOXICITY TO HISTI	Method: OECD Te	` ,	10 1119/1
Toxicity to daphnia	EC50 48 h		55 mg/l
Toxicity to daprillia	Method: OECD Te		33 mg/i
Toxicity to daphnia		Daphnia magna	100 mg/l
Toxiony to daprima	Method: OECD Te		100 1119/1
Toxicity to daphnia		Daphnia magna	25 mg/l
	Method: OECD Te		3.
Toxicity to algae	EC50 72 h	Scenedesmus subspicatus	5 mg/l
		(algae)	J.
	Method: OECD Te	est Guideline 201	
Toxicity to algae	NOEC 72 h	scenedesmus subspicatus	0.78 mg/l
	Method: OECD Te	est Guideline 201	
Toxicity to algae	LOEC 72 h	scenedesmus subspicatus	2.7 mg/l
	Method: OECD Te	est Guideline 201	
Toxicity to bacteria	IC50 3 h		741 mg/l
	Method: OECD-G	uideline No.209; 88/302/EEC C.11	

N-vinyl caprolactam

	Effect Exposure	e Species	Value
	dose time	·	
Toxicity to fish	LC50 96 h	Brachidanio rerio (zebra fish)	318 mg/l
	Method: OECD Te	est Guideline 203	
	Based on available	e data, the classification criteria are not met.	
Toxicity to daphnia	EC50 48 h	Daphnia magna	> 100 mg/l
,	Method: OECD Te	est Guideline 202	-
	Based on available	e data, the classification criteria are not met.	
Toxicity to algae	EC50 72 h	Scenedesmus subspicatus	> 100 mg/l
, -		(algae)	-
	Method: Literature	:	
	Based on available	e data, the classification criteria are not met.	
Toxicity to bacteria	EC50 16 h	Pseudomonas putida	622 mg/l
·		(bacteria)	-
	Method: OECD-Gu	uideline No.209; 88/302/EEC C.11	
	Based on available	e data, the classification criteria are not met.	

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	NOAE L	96 h	Leuciscus idus	1 mg/l
	Method: experim	Static ental result		
Toxicity to fish	LC50 Method:	96 h : Literature.	Leuciscus idus (golden orfe)	2.15 to 4.64 mg/l
	Based of	n available d	data, the classification criteria are not met	
Toxicity to algae	EC50	72 h	Algae	< 16.7 mg/l

REG_NOAM 16/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

	Toxicity to bacteria	Method: Literature. Based on available data, the classification criteria are not met.
		No data available

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect Exposure Species dose time	Value		
Toxicity to fish				
	No data available			
Toxicity to daphnia	No data available			
Toxicity to algae	No data available			
No data available				
Toxicity to bacteria				
-	No data available			

Isodecyl acrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Oncorhynchus mykiss	1.81 mg/l
			(rainbow trout)	
	Method	OECD Test	Guideline 203	
Toxicity to fish	NOEC	96 h	Oncorhynchus mykiss	0.381 mg/l
			(rainbow trout)	
	Method	OECD Test	Guideline 203	
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	1.3 mg/l
	Method	OECD Test	Guideline 202	
Toxicity to algae	EC50	72 h	Desmodesmus subspicatus	1.71 mg/l
			(algae)	
	Method	Literature.		
Toxicity to algae	NOEC	72 h	Desmodesmus subspicatus	0.45 mg/l
			(algae)	
	Method	OECD Test	Guideline 201	
Toxicity to bacteria	EC50	0.5 h	Pseudomonas putida	> 10,000 mg/l
			(bacteria)	
	Method	Literature.		

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	< 100.00 mg/l
	Method	: Literature.		
Toxicity to daphnia	EC0	48 h	Daphnia magna (water flea)	< 100.00 mg/l
	Method	: Literature.		
Toxicity to daphnia	EC50	48 h	Daphnia	3.53 mg/l
	Method	: Literature.		-
Toxicity to algae	EC50	72 h	Algae	> 1,000 mg/l
-	Method	: Literature.	-	-

REG_NOAM 17/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to bacteria	EC50 17 h Bacteria Method: Literature.	> 500.00 mg/l
 phenyl bis(2,4,6-tring) 	nethylbenzoyl)-phosphine oxide	
İ	Effect Francisco Consider	\ / = l =

·	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	> 0.09 mg/l
	Method	: OECD Test	Guideline 203	
Toxicity to daphnia	EC50	48 h	Daphnia magna	> 1,175 mg/l
	Method	: OECD Test	Guideline 202	
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	> 0.26 mg/l
, ,			(algae)	ŭ
	Method	: OECD Test	Guideline 201	
Toxicity to bacteria	EC50	3 h	Bacteria	> 100 mg/l
•	Method	: OECD-Guid	leline No.209: 88/302/EEC C.11	S

Caprolactam

	Effect dose	Exposure time	Species	Value
Toxicity to fish	LC50	48 h	Salmo gairdneri (rainbow trout)	> 500 mg/l
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	> 500 mg/l
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus (algae)	130 mg/l
Toxicity to bacteria	EC50	17 h	Pseudomonas putida (bacteria)	4,200 mg/l

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	48 h	Oryzias latipes (rice fish)	5.3 mg/l
	Method:	Literature.		
Toxicity to daphnia	EC50	48 h		0.48 mg/l
	Method:	OECD Test	Guideline 202	
Toxicity to algae	EC50	96 h	Algae	0.758 mg/l
	Method:	Literature.		
Toxicity to bacteria				
	No data	available		

• meguinol; 4-methoxyphenol; hydroguinone monomethyl ether

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish		96 h	Pisces (fish)	28.5 mg/l
	Method	: Literature.		
Toxicity to fish	LC50	96 h	Pimephales promelas (fathead minnow)	110 mg/l
	Method	: Literature.		
	Based	on available d	lata, the classification criteria are not met.	
Toxicity to daphnia	No data	available		

REG_NOAM 18/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to algae		
Toxicity to bacteria	No data available EC50 0.5 h Method: Literature.	4.61 mg/l

Cupferron Al

·	Effect dose	Exposure time	Species	Value
Toxicity to fish				
Toxicity to daphnia	No data	available		
Toxicity to daprima	No data	available		
Toxicity to algae				
Toxicity to bacteria	No data	available		
Toxiony to bacteria	No data	available		

12.2 Persistence and degradability:

Physico-chemical removability

Chemical Oxygen Demand (COD)

No data available

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

No data available

Biochemical Oxygen Demand (BOD)

No data available

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

No data available

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil:

No information available.

Henry's constant

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Value	Temperature	Method
		No information available.

Transport between environmental compartments

No data available

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer. Avoid infiltration in to drinking supplies, waste water or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Remove nonusable solid material and/or contaminated soil, for disposal in an approved and permitted landfill.

Empty containers.

Recondition or dispose of empty container in accordance with governmental regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261)

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

Not regulated according to IMO/IMDG.

Not regulated according to ICAO/IATA aircraft only.

Not regulated according to ICAO/IATA passenger and cargo aircraft.

Not Regulated according to US Department of Transportation (DOT) 49 CFR

Not regulated according to Transport of Dangerous Goods (TDG)

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

REG_NOAM 20/22 EN

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ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S, EPA TSCA) inventory.

US. OSHA Classification

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

US. SARA 311/312 Hazard Categories

Acute (Immediate) Chronic (Delayed)

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

		CAS-No.	Concentration [%]	
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

		<u>CAS-No.</u>		Concentration [%]		
 Caprolactam 	ctam	105-60-2	>=	0.1	-	<= 0.5
• 2,6-bis(1,1-dimethylethyl)-	128-37-0	>=	0.0	-	<= 0.0
4-methy	l-phenol					

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

		<u>CAS-NO.</u>	Concentration [%]		
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5	

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

		<u>CAS-No.</u>	Concentration [%]		
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5	

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists: See Section 2.

Canadian WHMIS Classification

E : Corrosive Material

Canadian Environmental Protection Act (CEPA)

This product contains the following components listed on the Canadian NDSL list.

modified polyacrylate

REG_NOAM 21/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 CYAN INK

SUBID:000001013999

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

H302 H315	Harmful if swallowed. Causes skin irritation.
нз 15 Н317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects (state route of exposure if it is
	conclusively proven that no other routes of exposure cause the hazard).
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

This MSDS is replacing Agfa MSDS number 1532G

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Agfa Corporation. The data on this SDS relates only to the specific material designated herein. Agfa Corporation assumes no legal responsibility for use or reliance upon these data. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

REG_NOAM 22/22 EN

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ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or mixture:

Product name : ARIGI UV K3 WHITE INK

MSDS Number : 000001014073

1.2 Use of the substance/mixture:

Use of the : Printer ink

Substance/Preparation

1.3 Company/undertaking identification

Agfa Corporation 611 River Drive Center 3

Elmwood Park, NJ 07407

U.S.A.

Transport Emergency Non-transportation

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS (Globally Harmonized Sys	GHS (Globally Harmonized System of Classification and Labelling of Chemicals)				
Hazard classes	Serious eye irritation				
Hazard categories	Category 2				
Hazard statements	H319				
Hazard classes	Skin irritation				
Hazard categories	Category 2				
Hazard statements	H315				
Hazard classes	Skin sensitizer				
Hazard categories	Category 1				
Hazard statements	H317				
Hazard classes	Toxic to reproduction				
Hazard categories Category 2					
Hazard statements	H361f				

2.2 Label elements:

Hazardous components which must be listed on the label:

Symbol(s)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015





Signal word WARNING Hazard H315

statements

H317 May cause an allergic skin reaction. Causes serious eye irritation. H319

Suspected of damaging fertility. H361f Obtain special instructions before use. P201

Causes skin irritation.

Precautionary statements: prevention

> P202 Do not handle until all safety precautions have been read and

> > understood.

P264 Wash ... thoroughly after handling.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face P280

protection.

P272 Contaminated work clothing should not be allowed out of the

workplace.

Precautionary statements:

response

P302+P352

IF ON SKIN: Wash with plenty of water/...

P332+P313

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing. P362

Wash contaminated clothing before reuse. P363

IF IN EYES: Rinse cautiously with water for several minutes. P305+P351+P

338

Remove contact lenses, if present and easy to remove.

Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention. P308+P313 IF exposed or concerned: Get medical advice/attention.

Precautionary statements:

P405

Store locked up.

storage

Precautionary statements:

P501NA

Dispose of contents / container to an approved waste

disposal facility.

disposal

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Printer ink, mainly consisting of:

REG NOAM 2/21 ΕN

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ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

Hazardous components

• 2-(2-Vinyloxyethoxy) ethyl acrylate Concentration [%]: 40.00 - 50.00

CAS-No. : 86273-46-3

Hazard classes : Acute toxicity Oral, Skin sensitizer, Chronic hazards to the aquatic

environment

Hazard categories : Category 4, Category 1, Category 3

Hazard statements : H302, H317, H412

• trimethylolpropane triacrylate Concentration [%]: 1.00 - 5.00

CAS-No. : 15625-89-5

Hazard classes : Serious eye irritation, Skin irritation, Skin sensitizer

Hazard categories : Category 2, Category 2, Category 1

Hazard statements : H319, H315, H317

• 3-methyl-1,5-pentanediyl diacrylate Concentration [%]: 10.00 - 20.00

CAS-No. : 64194-22-5

Hazard classes : Serious eye irritation, Skin irritation

Hazard categories : Category 2, Category 2

Hazard statements : H319, H315

• Phosphine oxide, diphenyl(2,4,6- Concentration [%]: 1.00 - 5.00

trimethylbenzoyl)-

CAS-No. : 75980-60-8

Hazard classes : Toxic to reproduction, Chronic hazards to the aquatic environment,

Skin sensitizer

Hazard categories : Category 2, Category 2

Hazard statements : H361f, H411, H317

• Ethyl phenyl(2,4,6- Concentration [%]: 1.00 - 5.00

trimethylbenzoyl)phosphinate

CAS-No. : 84434-11-7

Hazard classes : Chronic hazards to the aquatic environment, Skin sensitizer

Hazard categories : Category 2, Category 1

Hazard statements : H411, H317

• 2-Propenoic acid ,1-6-hexanediyl Concentration [%]: 1.00 - 5.00

ester, polymer with 2-aminoethanol

CAS-No. : 67906-98-3

Hazard classes : Skin irritation, Serious eye irritation

Hazard categories : Category 2, Category 2

Hazard statements : H315, H319

• Hexamethylene diacrylate Concentration [%]: 0.10 - 0.50

CAS-No. : 13048-33-4

Hazard classes : Serious eye irritation, Skin irritation, Skin sensitizer

Hazard categories : Category 2, Category 2, Category 1

REG_NOAM 3/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

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Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Hazard statements : H319, H315, H317

• Titanium dioxide Concentration [%]: 10.00 - 20.00

CAS-No. : 13463-67-7

mequinol; 4-methoxyphenol; hydroquinone
 Concentration [%]:
 0.01 0.05

monomethyl ether

CAS-No. : 150-76-5

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer

Hazard categories : Category 4, Category 2, Category 1

Hazard statements : H302, H319, H317

Cupferron Al
 ASSO No. 15005 07.4

CAS-No. : 15305-07-4

Concentration [%]:

Hazard classes : Germ cell mutagenicity

Tiazaru ciasses . Geriri celi mulageriicity

Hazard categories : Category 2 Hazard statements : H341

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol Concentration [%]: 0.01 - 0.05

CAS-No. : 128-37-0

Hazard classes : Acute hazards to the aquatic environment, Chronic hazards to the

aquatic environment

Hazard categories : Category 1, Category 1

Hazard statements : H400, H410

Components with a community workplace exposure limit

Titanium dioxide

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Cupferron Al

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

M-factor

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

Acute hazards to the aquatic environment : 1
Chronic hazards to the aquatic environment : 1

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

Eye contact : If in eyes, hold eyes open, flood with water for at least 15 minutes

and see a doctor. In case of irritation from airborne exposure, move

to fresh air.

Skin contact : Immediately flush with plenty of water for at least 15 minutes while

removing contaminated clothing and shoes. If skin irritation or an

allergic skin reaction develops, get medical attention.

Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary.

REG_NOAM 4/21 EN

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ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Do not induce vomiting.

Inhalation : Take patient to fresh air if necessary. Consult a physician if

necessary.

4.2 Most important symptoms and effects:

Symptoms : Upon contact with skin: redness, pain. In case of eye contact:

redness and pain. Ingestion can cause nausea, vomiting and

diarrhea. May cause headache and dizziness.

4.3 Indication of immediate medical attention and special treatment needed:

General advice : Call a physician immediately.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam., Carbon dioxide (CO2)., Dry extinguishing

powder., Water.

Extinguishing media which

must not be used for safety

reasons

: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Specific hazards during fire

fighting

: Do not use a solid water stream as it may scatter and spread fire.

: Collect contaminated fire extinguishing water separately. This must

not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment

for fire-fighters

Further information

: Firefighters should be equipped with self-contained breathing

apparatus to protect against potentially toxic and irritating fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions : Cleanup personnel must use appropriate personal protective

equipment.

Additional advice : Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions : The product should not be allowed to enter drains, water courses or

the soil.

6.3 Methods and material for containment and cleaning up:

REG_NOAM 5/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Methods for cleaning up : Dike the spill if necessary. If spill occurs, apply a suitable absorbent

material and collect into an impervious waste container. Collect the

product in a plastic vessel. Carefully collect leftovers.

6.4 Reference to other sections:

For waste disposal see section 13. For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling : Prevent product from diffusing.

Hygiene measures : Employees should wash their hands and face before eating,

> drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and

eve wash stations should be available.

Advice on protection against

fire and explosion

: No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage

areas and containers

: Keep container tightly closed. Keep in a dry place.

conditions

Further information on storage : Keep container in a well-ventilated place.

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values (US)

CAS-No.: 13463-67-7 Titanium dioxide

Basis	Revision	Value	Type	
	Date			
ACGIH	01 2006	10 mg/m3	TWA	
OSHA Z1	02 2006	15 mg/m3	PEL	
OSHA Z1A	1989	10 mg/m3	TWA	
TN OEL	06 2008	10 mg/m3	TWA	

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ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

mequinol; 4-methoxyphenol; hydroquinone monomethyl other

CAS-No.: 150-76-5

Basis	Revision	Value	Type
	Date		
ACGIH	2004	5 mg/m3	TWA
NIOSH	06 1997	5 mg/m3	REL
TN OEL	06 2008	5 mg/m3	TWA

• Cupferron Al CAS-No.: 15305-07-4

Basis	Revision Date	Value	Туре
ACGIH	03 2014	1 mg/m3	TWA

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol CAS-No.: 128-37-0

Basis	Revision	Value	Type
	Date		
NIOSH	06 1997	10 mg/m3	REL
ACGIH	01 2005	2 mg/m3	TWA
ACGIH	01 2005	2 mg/m3	TWA
TN OEL	06 2008	10 mg/m3	TWA
US CA OEL	02 2012	10 mg/m3	TWA PEL

Air limit values (CA)

• Titanium dioxide CAS-No.: 13463-67-7

Basis	Revision Date	Value	Туре
CAD AB OEL	04 2004	10 mg/m3	TWA
CAD BC OEL	07 2006	10 mg/m3	TWA
CAD BC OEL	07 2006	3 mg/m3	TWA
CAD ON OEL	03 2006	10 mg/m3	TWAEV
OEL (QUE)	12 2008	10 mg/m3	TWA
CAD SK OEL	05 2009		8 HR ACL
CAD SK OEL	05 2009	20 mg/m3	15 MIN ACL
CAD MB OEL	03 2011	10 mg/m3	TWA

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Basis	Revision Date	Value	е Туре
CAD AB OEL	01 1997	5 mg/m3	3 TWA

REG_NOAM 7/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

CAS-No.: 15305-07-4

CAS-No.: 128-37-0

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

CAD BC OEL	01 1997	5 mg/m3	TWA
CAD ON	09 2000	5 mg/m3	TWAEV
OEL OEL (QUE) CAD SK OEL CAD SK OEL	05 2009	10 mg/m3	8 HR ACL 15 MIN ACL
CAD MB OEL	03 2011	5 mg/m3	TWA

Cupferron Al

Basis	Revision Date	Value	Туре	
CAD BC OEL	05 2013	1 mg/m3	TWA	
CAD MB OEL	03 2014	1 mg/m3	TWA	
CAD ON OEL	11 2010	1 mg/m3	TWAEV	
CAD SK OEL CAD SK OEL	05 2009 05 2009		8 HR ACL 15 MIN ACL	

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

,, -,				C/ (C) (C)
Basis	Revision	Value	Туре	
	Date			
CAD AB OEL	10 2003	10 mg/m3	TWA	
CAD BC	08 2004	2 mg/m3	TWA	
OEL		_		
CAD BC	08 2004	2 mg/m3	TWA	
OEL				
OEL (QUE)	12 2008	10 mg/m3	TWA	
CAD SK OEL	05 2009	2 mg/m3	8 HR ACL	
CAD SK OEL	05 2009	4 mg/m3	15 MIN ACL	
CAD MB	03 2011	2 mg/m3	TWA	
OEL				
CAD ON	11 2010	2 mg/m3	TWAEV	
OEL				
	112010	2 mg/m3	1 VV/\L V	

Biological limit values (US)

We are not aware of any national exposure limit.

Biological limit values (CA)

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

8.2 Exposure controls:

Occupational exposure controls:

> Instruction measures to prevent exposure:

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

> Technical measures to prevent exposure:

Ensure adequate ventilation.

> Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not

required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard

Z94.4-02.

Hand protection : Use chemical resistant gloves. In case of prolonged immersion or

frequently repeated contact use gloves made of the materials: butylrubber (thickness >= 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard

EN374.

Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these

properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of

types of use are prescribed by the manufacturer.

Eye protection : Safety goggles. EN 166.

Body Protection : Safety clothes : long sleeved clothing EN13688

Personal protective : Observe normal precautions when handling chemicals.

equipment

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:

State of matter : Liquid Form : Liquid. Color : White.

Odor : Sweetish smell
Odor threshold : No data available

9.1.2 Important health, safety and environmental information:

REG_NOAM 9/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015

Hq Not applicable

Melting point/range : < 0 °C Method: Literature. : > 100 °C Boiling point/range Method: Literature. : > 100 °C Flash point Method: Literature.

Autoignition temperature : No data available : No data available Vapour pressure Relative vapour density : No data available

: 1.176 Relative density Method: Literature.

Density : No data available Solubility/qualitative : Immiscible with water. Water solubility : No data available Partition coefficient (n-: No data available

octanol/water)

No data available
Viscosity, dynamic Viscosity, kinematic Lower explosion limit
Upper explosion limit Evaporation rate : No data available

Flammability (solid, gas) : Not flammable. Method: Literature.

9.2 Other information:

VOC content : 2.1 g/l

VOC content excluding water

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity : Reactivity is not to be expected under normal conditions of

temperature and pressure.

10.2 Chemical stability:

Stability : The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:

Hazardous reactions : The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:

Conditions to avoid : Avoid contact with strong acids.

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition : No specified dangerous decomposition products are known.

REG NOAM 10/21 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

products

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics, metabolism and distribution:

No data available

Acute effects (toxicity tests):

> Acute Toxicity

• 2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,790 mg/kg	OECD Test Guideline 401
Acute oral toxicity	LD50	rat	2,026 mg/kg	OECD Test Guideline 401
Acute dermal toxicity	Based on av LD50	ailable data, t rat	he classification criteria > 2,000 mg/kg	are not met. OECD Test Guideline 402
Acute inhalation toxicity	Based on av LC50	ailable data, t rat	he classification criteria 5.82 mg/l/ 4 h	are not met. OECD Test Guideline 403

trimethylolpropane triacrylate

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	> 3,000 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute dermal toxicity	LD50	rabbit	> 6,000 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute inhalation toxicity	LC 50	Rat	> 0.55 mg/l/ 6 h
	Vapor		

• 3-methyl-1,5-pentanediyl diacrylate

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

 Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
--

	Effect dose	Species	Value	Method

REG_NOAM 11/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Acute oral toxicity	LD50 rat	> 2,000 mg/kg Literature.	1
	Based on available data	, the classification criteria are not met.	
Acute dermal toxicity	LD50 rat	> 2,000 mg/kg Literature.	
	Based on available data	, the classification criteria are not met.	
Acute inhalation toxicity			
Į į	No data available		

• Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	> 5,000 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute dermal toxicity	LD50	rabbit	>= 2,000 mg/kg Literature.
Acute inhalation toxicity	LC 50	Rat	>= 0.000027 mg/l/
			7 h
	Vapor		

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

Hexamethylene diacrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	> 5,000 mg/kg	OECD Test Guideline
				401
	Based on av	ailable data	, the classification criteria	are not met.
Acute dermal toxicity	LD50	rabbit	3,650 mg/kg	OECD Test Guideline
				402
	Based on av	ailable data	, the classification criteria	are not met.
Acute inhalation toxicity	LCo	rat	> 0.41 mg/l/ 7 h	Literature.

Titanium dioxide

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	> 5,000 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute dermal toxicity			
	No data avai	lable	
Acute inhalation toxicity	LC50	rat	> 6.82 mg/l/ 4 h Literature.

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,600 mg/kg	Literature.
Acute dermal toxicity		rat	> 2,000 mg/kg	OECD N° 423
-	Based on ava	ailable data,	the classification criteria	are not met.
Acute inhalation toxicity				

REG_NOAM	12/21	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

	No data available
Cupferron Al	

	Effect dose Specie	s Value	Method
Acute oral toxicity			
	No data available		
Acute dermal toxicity			
	No data available		
Acute inhalation toxicity			
-	No data available		

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rabbit	6,000 mg/kg	OECD Test Guideline
-				401
	Based on ava	ailable data, t	he classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on ava	ailable data, t	he classification criteria	are not met.
Acute inhalation toxicity				
	No data avai	lable		

> Specific target organ toxicity (STOT):

Specific effects	Affected organs
Based on available data, the classification criteria are not met.	

> Irritant and corrosive effects:

	Exposure time	Species	Evaluation	Method	
Primary irritation to the skin					
	Irritating to	skin.			
Irritation to eyes					
	Eye irritatio	n			

> Irritation to the respiratory tract:

Based on available data, the classification criteria are not met.

> Sensitisation:

Species	Evaluation	Method
	May cause sensitization of susceptible persons by skin contact.	

> Aspiration hazard:

No data available

REG_NOAM	13/21	EN
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ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Sub-acute, sub-chronic and chronic toxicity

> Repeated dose toxicity:

No data available

> Specific target organ toxicity (STOT):

Based on available data, the classification criteria are not met.

- > CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
- Carcinogenicity

Based on available data, the classification criteria are not met.

- Mutagenicity

Based on available data, the classification criteria are not met.

- Genetic toxicity in vitro

No data available

- Genetic toxicity in vivo

No data available

- Teratogenicity

Based on available data, the classification criteria are not met.

- Toxicity to reproduction

Possible risk of impaired fertility.

> Summarised evaluation of the CMR properties:

Carcinogenicity : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Teratogenicity : Based on available data, the classification criteria are not met.

Toxicity to reproduction : Possible risk of impaired fertility.

Experiences made in practice:

At high concentrations the monomer vapours can cause eye and nose irritation. Symptoms may be delayed. Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use. Other dangerous properties can not be excluded.

REG_NOAM 14/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

• 2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect Exposure Species	Value
	dose time	
Toxicity to fish	LC50 96 h Brachidanio rerio (zebra fish)	6.8 mg/l
	Method: OECD Test Guideline 203	
Toxicity to fish	NOEC 96 h Brachidanio rerio (zebra fish)	2.2 mg/l
	Method: OECD Test Guideline 203	
Toxicity to fish	LC100 96 h Brachidanio rerio (zebra fish)	10 mg/l
	Method: OECD Test Guideline 203	
Toxicity to daphnia	EC50 48 h Daphnia magna	55 mg/l
	Method: OECD Test Guideline 202	_
Toxicity to daphnia	EC100 48 h Daphnia magna	100 mg/l
	Method: OECD Test Guideline 202	
Toxicity to daphnia	NOEC 48 h Daphnia magna	25 mg/l
	Method: OECD Test Guideline 202	
Toxicity to algae	EC50 72 h Scenedesmus subspicatus	5 mg/l
	(algae)	_
	Method: OECD Test Guideline 201	
Toxicity to algae	NOEC 72 h scenedesmus subspicatus	0.78 mg/l
	Method: OECD Test Guideline 201	J
Toxicity to algae	LOEC 72 h scenedesmus subspicatus	2.7 mg/l
	Method: OECD Test Guideline 201	J
Toxicity to bacteria	IC50 3 h	741 mg/l
	Method: OECD-Guideline No.209; 88/302/EEC C.11	J

trimethylolpropane triacrylate

	Effect Exp	osure Species	Value
	dose time		
Toxicity to fish	LC 50 96 h Method: Station		1.47 mg/l
Toxicity to daphnia	LC 50 48 h Method: Station		19 mg/l
Toxicity to algae	No data availa	able	
Toxicity to bacteria			
	No data availa	able	

• 3-methyl-1,5-pentanediyl diacrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish				
	No data	available		
Toxicity to daphnia				

REG_NOAM 15/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to algo	No data available
Toxicity to algae	No data available
Toxicity to bacteria	No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	< 100.00 mg/l
	Method	: Literature.		
Toxicity to daphnia	EC0	48 h	Daphnia magna (water flea)	< 100.00 mg/l
	Method	: Literature.		
Toxicity to daphnia	EC50	48 h	Daphnia	3.53 mg/l
	Method	: Literature.		
Toxicity to algae	EC50	72 h	Algae	> 1,000 mg/l
	Method	: Literature.		
Toxicity to bacteria	EC50	17 h	Bacteria	> 500.00 mg/l
	Method	: Literature.		

• Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate

	Effect Ex	xposure	Species	Value
	dose tin	ne		
Toxicity to fish	LC100 96	3 h	Brachidanio rerio (zebra fish)	10 mg/l
	Method: Lite	erature.		
Toxicity to fish	LC50 48	3 h	Orange-red killifish	6.53 mg/l
-	Method: Lite	erature.		
Toxicity to daphnia	EC50 48	3 h	Daphnia magna	31.5 mg/l
	Method: Lite	erature.		
Toxicity to algae				
	No data ava	ailable		
Toxicity to bacteria				
	No data ava	ailable		

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose	Exposure time	Species	Value
Toxicity to fish	No data	available		
Toxicity to daphnia	No data	available		
Toxicity to algae	No data	available		
Toxicity to bacteria	No data	available		

Hexamethylene diacrylate

Effect	Exposure	Species	Value
dose	time		

REG_NOAM 16/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to fish	LC50 96 h	Leuciscus idus (golden orfe)	4.6 to 10 mg/l
Toxicity to daphnia	Method: DIN 38412 EC 50 48 h		2.6 mg/l
Toxicity to daprima	Method: Static experimental result		2.0 mg/i
Toxicity to daphnia	EC0 24 h	Daphnia magna	1.6 mg/l
	Method: Literature.		
Toxicity to daphnia	EC 50 24 h		6 mg/l
	Method: Static		
	experimental result		
Toxicity to daphnia	EC50 24 h	Daphnia magna	6 mg/l
	Method: Literature.		
Toxicity to daphnia	EC100 24 h	Daphnia magna	25 mg/l
	Method: Literature.		
Toxicity to daphnia	EC0 48 h	Daphnia magna	0.8 mg/l
	Method: Literature.		
Toxicity to daphnia	EC50 48 h	Daphnia magna	2.6 mg/l
	Method: Literature.	••	"
Toxicity to algae	NOEC 72 h	Algae	ca. 0.5 mg/l
Taviaituta alaaa	Method: DIN 38412	Alma	0.50/
Toxicity to algae	EC10 72 h	Algae	0.59 mg/l
Taxiaity ta algon	Method: DIN 38412	Alexan	4.5 //
Toxicity to algae	EC50 72 h Method: DIN 38412	Algae	1.5 mg/l
Toxicity to bacteria	EC50 0.5 h		ca 270 mg/l
Toxicity to bacteria		eline No.209; 88/302/EEC C.11	ca. 270 mg/l
	Welliou. OLCD-Guiu	GIIIIG 140.203, 00/302/LLC C.11	

• Titanium dioxide

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Pimephales promelas (fathead minnow)	> 1,000 mg/l
	Method:	Literature.		
	Based o	n available d	lata, the classification criteria are not met.	
Toxicity to daphnia	EC50 Method:	48 h Literature.	Daphnia magna	> 1,000 mg/l
Toxicity to algae		72 h	Selenastrum capricornutum (green algae)	61 mg/l
	Method:	Literature.		
Toxicity to bacteria				
	No data	available		

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

· · ·		<u>, , , , , , , , , , , , , , , , , , , </u>	, , , , , , , , , , , , , , , , , , ,	\
	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish		96 h	Pisces (fish)	28.5 mg/l
	Method: L	_iterature.		
Toxicity to fish	LC50	96 h	Pimephales promelas (fathead minnow)	110 mg/l
REG_NOAM			17/21	EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to daphnia	Method: Literature. Based on available data, the classification criteria are not met.	
Toxicity to algae	No data available	
TOXICITY to algae	No data available	
Toxicity to bacteria	EC50 0.5 h Method: Literature.	4.61 mg/l

Cupferron Al

·	Effect	Exposure	Species	Value
Toxicity to fish	dose	time		
Toxiony to non	No data	available		
Toxicity to daphnia				
	No data	available		
Toxicity to algae	No doto	available		
Toxicity to bacteria	No data	avallable		
Toxiony to bacteria	No data	available		

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	48 h	Oryzias latipes (rice fish)	5.3 mg/l
	Method	: Literature.		_
Toxicity to daphnia	EC50	48 h		0.48 mg/l
	Method	: OECD Test	Guideline 202	_
Toxicity to algae	EC50	96 h	Algae	0.758 mg/l
	Method	: Literature.	_	_
Toxicity to bacteria				
-	No data	available		

12.2 Persistence and degradability:

Physico-chemical removability

Chemical Oxygen Demand (COD)

No data available

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

No data available

Biochemical Oxygen Demand (BOD)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

No data available

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

No data available

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil:

No information available.

Henry's constant

Value	Temperature	Method
		No information available.

Transport between environmental compartments

No data available

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer. Avoid infiltration in to drinking supplies, waste water or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

May be discharged to drain if local regulations permit.

SECTION 14. TRANSPORT INFORMATION

Not regulated according to IMO/IMDG.

Not regulated according to ICAO/IATA aircraft only.

Not regulated according to ICAO/IATA passenger and cargo aircraft.

Not Regulated according to US Department of Transportation (DOT) 49 CFR

Not regulated according to Transport of Dangerous Goods (TDG)

REG_NOAM 19/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S, EPA TSCA) inventory.

US. OSHA Classification

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

US. SARA 311/312 Hazard Categories

Acute (Immediate) Chronic (Delayed)

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

		<u>CAS-No.</u>	<u>Concent</u> i	ration [%]
•	Titanium dioxide	13463-67-7	>= 10.0 -	<= 20.0
•	Carbon Black (carbon)	1333-86-4	>=	<=

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

		CAS-No.	Cond	cent	ration [%]
•	Titanium dioxide	13463-67-7	>= 10.0	-	<= 20.0
•	2,6-bis(1,1-dimethylethyl)- 4-methyl-phenol	128-37-0	>= 0.0	-	<= 0.0
•	Carbon Black (carbon)	1333-86-4	>=		<=
•	blue organic pigment	147-14-8	>=		<=

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

	CAS-No.		Concentration [%]		
 Titanium dioxide 	13463-67-7	>= 10.0	-	<= 20.0	
 Carbon Black (carbon) 	1333-86-4	>=		<=	

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

	CAS-No.	Concentr	ation [%]
 Titanium dioxide 	13463-67-7	>= 10.0 -	<= 20.0
 Carbon Black (carbon) 	1333-86-4	>=	<=

REG_NOAM 20/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 WHITE INK

SUBID:000001014073

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists: See Section 2.

Canadian WHMIS Classification

D2B : Toxic material causing other toxic effects

Canadian Environmental Protection Act (CEPA)

All components of this product are on the Canadian DSL list.

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

This MSDS is replacing Agfa MSDS number 1535G.000

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Agfa Corporation. The data on this SDS relates only to the specific material designated herein. Agfa Corporation assumes no legal responsibility for use or reliance upon these data. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

REG_NOAM 21/21 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or mixture:

Product name : ARIGI UV K3 MAGENTA INK

MSDS Number : 000001014003

1.2 Use of the substance/mixture:

Use of the : Printer ink

Substance/Preparation

1.3 Company/undertaking identification

Agfa Corporation 611 River Drive Center 3

Elmwood Park, NJ 07407

U.S.A.

Transport Emergency Non-transportation

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS (Globally Harmonized Sys	GHS (Globally Harmonized System of Classification and Labelling of Chemicals)				
Hazard classes	Skin irritation				
Hazard categories	Category 2				
Hazard statements	H315				
 Hazard classes 	Serious eye damage				
Hazard categories	Category 1				
Hazard statements	H318				
 Hazard classes 	Skin sensitizer				
Hazard categories	Category 1				
Hazard statements	H317				
Hazard classes	Specific target organ toxicity - repeated exposure				
Hazard categories	Category 1				
Hazard statements	H372				

2.2 Label elements:

Hazardous components which must be listed on the label:

Symbol(s)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015



exposure cause the hazard). Precautionary P260 Do not breathe dust/fume/gas/mist/vapours/spray.

statements: prevention

> P270 Do not eat, drink or smoke when using this product.

P264 Wash ... thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face P280

of exposure if it is conclusively proven that no other routes of

protection.

P272 Contaminated work clothing should not be allowed out of the

workplace.

Precautionary statements:

response

P302+P352

IF ON SKIN: Wash with plenty of water/...

If skin irritation or rash occurs: Get medical advice/attention. P333+P313 Take off contaminated clothing. P362

Wash contaminated clothing before reuse. P363 IF IN EYES: Rinse cautiously with water for several minutes. P305+P351+P

Remove contact lenses, if present and easy to remove. 338

Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/...

Get medical advice/attention if you feel unwell. P314

Precautionary statements: disposal

P501NA

Dispose of contents / container to an approved waste

disposal facility.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Printer ink, mainly consisting of:

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

REG NOAM 2/22 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR



1910.1200 and the Canadian Hazardous Products Act

ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Hazardous components

• 2-(2-Vinyloxyethoxy) ethyl acrylate Concentration [%]: 40.00 - 60.00

CAS-No. : 86273-46-3

Hazard classes : Acute toxicity Oral, Skin sensitizer, Chronic hazards to the aquatic

environment

Hazard categories : Category 4, Category 1, Category 3

Hazard statements : H302, H317, H412

CAS-No. : 57472-68-1

Hazard classes : Skin irritation, Serious eye damage, Skin sensitizer

Hazard categories : Category 2, Category 1, Category 1

Hazard statements : H315, H318, H317

• N-vinyl caprolactam Concentration [%]: 10.00 - 20.00

CAS-No. : 2235-00-9

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer, Specific

target organ toxicity - repeated exposure Inhalation

Hazard categories : Category 4, Category 2, Category 1B, Category 1

Hazard statements : H302, H319, H317, H372

• Isodecyl acrylate Concentration [%]: 1.00 - 5.00

CAS-No. : 1330-61-6

Hazard classes : Serious eye irritation, Specific target organ toxicity - single

exposure, Skin irritation, Chronic hazards to the aquatic

environment

Hazard categories : Category 2, Category 3, Category 2, Category 2

Hazard statements : H319, H335, H315, H411

• Phosphine oxide, diphenyl(2,4,6- Concentration [%]: 1.00 - 5.00

trimethylbenzoyl)-

CAS-No. : 75980-60-8

Hazard classes : Toxic to reproduction, Chronic hazards to the aquatic environment,

Skin sensitizer

Hazard categories : Category 2, Category 2, Category 1

Hazard statements : H361f, H411, H317

• 2-Propenoic acid ,1-6-hexanediyl Concentration [%]: 1.00 - 5.00

ester, polymer with 2-aminoethanol

CAS-No. : 67906-98-3

Hazard classes : Skin irritation, Serious eye irritation

Hazard categories : Category 2, Category 2

Hazard statements : H315, H319

• Caprolactam Concentration [%]: 0.10 - 0.50

CAS-No. : 105-60-2

Hazard classes : Acute toxicity Oral, Acute toxicity Inhalation, Serious eye irritation,

Specific target organ toxicity - single exposure Inhalation, Skin

irritation

Hazard categories : Category 4, Category 2, Category 3, Category 2

Hazard statements : H302, H332, H319, H335, H315

REG_NOAM 3/22 EN

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ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

mequinol; 4-methoxyphenol; hydroquinone
 Concentration [%]:
 0.10 0.50

monomethyl ether

CAS-No. : 150-76-5

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer

Hazard categories : Category 4, Category 2, Category 1

Hazard statements : H302, H319, H317

• Cupferron Al Concentration [%]: 0.01 - 0.05

CAS-No. : 15305-07-4

Hazard classes : Germ cell mutagenicity

Hazard categories : Category 2
Hazard statements : H341

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol Concentration [%]: 0.01 - 0.05

CAS-No. : 128-37-0

Hazard classes : Acute hazards to the aquatic environment, Chronic hazards to the

aquatic environment

Hazard categories : Category 1, Category 1

Hazard statements : H400, H410

Components with a community workplace exposure limit

Caprolactam

• meguinol; 4-methoxyphenol; hydroquinone monomethyl ether

Cupferron Al

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

M-factor

2,6-bis(1,1-dimethylethyl)-4-methyl-phenol
 Acute hazards to the aquatic environment
 Chronic hazards to the aquatic environment

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

Eye contact : Immediately flush eye(s) with plenty of water. Consult an oculist if

necessary.

Skin contact : Immediately flush with plenty of water for at least 15 minutes while

removing contaminated clothing and shoes. Get medical attention if

symptoms occur.

Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary.

Do not induce vomiting.

Inhalation : Take patient to fresh air if necessary. Consult a physician if

necessary.

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

4.2 Most important symptoms and effects:

Symptoms : Upon contact with skin: redness, pain. In case of eye contact:

redness and pain. Ingestion can cause nausea, vomiting and

diarrhea. May cause headache and dizziness.

4.3 Indication of immediate medical attention and special treatment needed:

General advice : Call a physician immediately.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam., Carbon dioxide (CO2)., Dry extinguishing

powder., Water.

Extinguishing media which must not be used for safety

reasons

Further information

: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Specific hazards during fire

fighting

: Do not use a solid water stream as it may scatter and spread fire.

: Collect contaminated fire extinguishing water separately. This must

not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment

for fire-fighters

: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions : Cleanup personnel must use appropriate personal protective

equipment.

Additional advice : Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions : The product should not be allowed to enter drains, water courses or

the soil.

6.3 Methods and material for containment and cleaning up:

Methods for cleaning up : Dike the spill if necessary. If spill occurs, apply a suitable absorbent

material and collect into an impervious waste container. Collect the

product in a plastic vessel. Carefully collect leftovers.

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015

6.4 Reference to other sections:

For waste disposal see section 13. For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling : Prevent product from diffusing.

: Employees should wash their hands and face before eating, Hygiene measures

> drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and

eye wash stations should be available.

Advice on protection against

fire and explosion

: No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage

areas and containers

: Keep container tightly closed. Keep in a dry place.

conditions

Further information on storage : Keep container in a well-ventilated place.

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values (US)

 Caprolactam CAS-No.: 105-60-2

Basis	Revision	Value	Туре
	Date		
OSHA Z1A	1989	1 mg/m3	5 TWA
OSHA Z1A	1989	20 mg/m3	5 TWA
		5 ppm	
OSHA Z1A	1989	40 mg/m3	STEL
		10 ppm	l e e e e e e e e e e e e e e e e e e e
OSHA Z1A	1989	3 mg/m3	STEL
ACGIH	01 2005	5 mg/m3	5 TWA

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ARIGI UV K3 MAGENTA INK

SUBID:000001014003

CAS-No.: 150-76-5

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

ACGIH	01 2005	5 mg/m3	TWA	
TN OEL	06 2008	20 mg/m3	TWA	
		5 ppm		
TN OEL	06 2008	1 mg/m3	TWA	
TN OEL	06 2008	40 mg/m3	STEL	
		10 ppm		
TN OEL	06 2008	3 mg/m3	STEL	

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Basis	Revision Date	Value	Туре
ACGIH	2004	5 mg/m3	TWA
NIOSH	06 1997	5 mg/m3	REL
TN OEL	06 2008	5 mg/m3	TWA

• Cupferron Al CAS-No.: 15305-07-4

Basis	Revision Date	Value	Туре
ACGIH	03 2014	1 mg/m3	TWA

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol CAS-No.: 128-37-0

Basis	Revision	Value	Type
	Date		
NIOSH	06 1997	10 mg/m3	REL
ACGIH	01 2005	2 mg/m3	TWA
ACGIH	01 2005	2 mg/m3	TWA
TN OEL	06 2008	10 mg/m3	TWA
US CA OEL	02 2012	10 mg/m3	TWA PEL

Air limit values (CA)

Caprolactam
 CAS-No.: 105-60-2

o Ouprolact	~			5. 10 1 100 00 <u></u>
Basis	Revision Date	Value	Туре	
CAD BC OEL	12 2005	1 mg/m3	TWA	
CAD BC OEL	12 2005	3 mg/m3	STEL	
CAD ON OEL	04 2005	5 mg/m3	TWAEV	
OEL (QUE)	12 2008	1 mg/m3	TWA	
OEL (QUE)	12 2008	23 mg/m3	TWA	
OEL (QUE)	12 2008	46 mg/m3	STEL	
OEL (QUE)	12 2008	3 mg/m3	STEL	
CAD AB OEL	07 2009	5 mg/m3	TWA	

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ARIGI UV K3 MAGENTA INK

SUBID:000001014003

CAS-No.: 150-76-5

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

CAD SK OEL CAD SK OEL CAD MB OEL		0	8 HR ACL 15 MIN ACL TWA	
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mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Basis	Revision Date	Value	Туре
CAD AB OEL	01 1997	5 mg/m3	TWA
CAD BC	01 1997	5 mg/m3	IVVA
OEL			
CAD ON	09 2000	5 mg/m3	TWAEV
OEL		_	
OEL (QUE)	12 2008	5 mg/m3	TWA
CAD SK OEL	05 2009	5 mg/m3	8 HR ACL
CAD SK OEL	05 2009		15 MIN ACL
CAD MB	03 2011	5 mg/m3	
OEL		Jg,g	
0			

• Cupferron Al CAS-No.: 15305-07-4

Basis	Revision	Value	Туре
	Date		
CAD BC	05 2013	1 mg/m3	TWA
OEL		_	
CAD MB	03 2014	1 mg/m3	TWA
OEL		•	
CAD ON	11 2010	1 mg/m3	TWAEV
OEL		•	
CAD SK OEL	05 2009	10 mg/m3	8 HR ACL
CAD SK OEL	05 2009		15 MIN ACL

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol CAS-No.: 128-37-0

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Basis	Revision	Value	Туре
	Date		
CAD AB OEL	10 2003	10 mg/m3	TWA
CAD BC	08 2004	2 mg/m3	TWA
OEL			
CAD BC	08 2004	2 mg/m3	TWA
OEL			
OEL (QUE)	12 2008	10 mg/m3	TWA
CAD SK OEL	05 2009	2 mg/m3	8 HR ACL
CAD SK OEL	05 2009	4 mg/m3	15 MIN ACL
CAD MB	03 2011	2 mg/m3	TWA
OEL			
CAD ON	11 2010	2 mg/m3	TWAEV
OEL			

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ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Biological limit values (US)

We are not aware of any national exposure limit.

Biological limit values (CA)

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

8.2 Exposure controls:

Occupational exposure controls:

> Instruction measures to prevent exposure:

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

> Technical measures to prevent exposure:

Ensure adequate ventilation.

> Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not

required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard

Z94.4-02.

Use chemical resistant gloves. In case of prolonged immersion or Hand protection

> frequently repeated contact use gloves made of the materials: butylrubber (thickness >= 0.70 mm, breakthrough time > 480 min). (EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard

EN374.

Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar

substances. Because several factors may influence these properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of

types of use are prescribed by the manufacturer.

Eye protection Safety goggles. EN 166.

Body Protection Safety clothes: long sleeved clothing EN13688

Personal protective Educate and train employees in the safe use and handling of this equipment

product. Emergency showers and eye wash stations should be

available.

REG NOAM 9/22 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:

State of matter : Liquid
Form : Liquid.
Color : Magenta
Odor : Sweetish smell
Odor threshold : No data available

9.1.2 Important health, safety and environmental information:

pH : Not applicable

Autoignition temperature : No data available Vapour pressure : No data available Relative vapour density : No data available

Relative density : 1.052 Method: Literature.

Density : No data available
Solubility/qualitative : Immiscible with water.
Water solubility : No data available
Partition coefficient (n- : No data available

octanol/water)

Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Lower explosion limit : No data available
Upper explosion limit : No data available
Evaporation rate : No data available

Flammability (solid, gas) : Product is not combustible.

9.2 Other information:

VOC content : 2.1 g/l

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity : Reactivity is not to be expected under normal conditions of

temperature and pressure.

10.2 Chemical stability:

Stability : The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:

REG_NOAM 10/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Hazardous reactions : The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:

Conditions to avoid : No data available

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition

products

: No specified dangerous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics, metabolism and distribution:

No data available

Acute effects (toxicity tests):

> Acute Toxicity

• 2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,790 mg/kg	OECD Test Guideline
				401
Acute oral toxicity	LD50	rat	2,026 mg/kg	OECD Test Guideline
				401
	Based on ava	ailable data, the	classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on ava	ailable data, the	classification criteria	are not met.
Acute inhalation toxicity	LC50	rat	5.82 mg/l/ 4 h	OECD Test Guideline
				403

Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	4,600 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute dermal toxicity	LD 50	Rabbit	> 2,000 mg/kg
Acute inhalation toxicity	LC 0	Rat	0.41 mg/l/ 7 h
	Vapor		

N-vinyl caprolactam

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

	Effect dose	Species	Value Method	
Acute oral toxicity	LD50	rat	ca. 1,400 mg/kg Literature.	
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg Literature.	
	Based on av	ailable data,	the classification criteria are not met.	
Acute inhalation toxicity	LC50	rat		
·	It was demo respirable as		during intended and foreseen applicated.	itions, no

Isodecyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	+/- 4,435 mg/kg	
Acute dermal toxicity	LD 50	Rabbit	7,522 mg/kg	
Acute inhalation toxicity	LC 50	Rat	> 1.19 mg/l/ 8 h	
	Vapor			

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute inhalation toxicity			
	No data avai	lable	

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

Caprolactam

·	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,475 mg/kg	Directive 92/32/EEC, Annex V, B.1.
	Harmful by in	halation and if swa	llowed.	
Acute oral toxicity	LD50	rat	1,876 mg/kg	Directive 92/32/EEC, Annex V, B.1.
	Harmful by in	halation and if swa	llowed.	
Acute dermal toxicity	LD50 Harmful in co	rabbit ontact with skin.	1,440 mg/kg	Literature.
Acute inhalation toxicity	LC50	rat	8.16 mg/l/ 4 h	OECD Test Guideline 403
	Harmful by in	halation.		

•	mequinol	; 4-met	hoxyp	henol;	hyd	Iroquinone	monomethyl ether
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Effect dose Species Value Method

REG_NOAM 12/22 EN	
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Acute oral toxicity	LD50	rat	1,600 mg/kg	Literature.
Acute dermal toxicity		rat	> 2,000 mg/kg	
	Based on ava	ailable data, the	e classification criteria	are not met.
Acute inhalation toxicity				
	No data avai	lable		

Cupferron Al

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rabbit	6,000 mg/kg	OECD Test Guideline
				401
	Based on ava	ailable data,	the classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on ava	ailable data,	the classification criteria	are not met.
Acute inhalation toxicity				
	No data avail	lable		

> Specific target organ toxicity (STOT):

Specific effects	Affected organs
Based on available data, the classification criteria are not met.	

> Irritant and corrosive effects:

	Exposure time	Species	Evaluation	Method
Primary irritation to the skin				
	Irritating to	skin.		
Irritation to eyes				
	Risk of seri	ous damage	to eyes.	

> Irritation to the respiratory tract:

Based on available data, the classification criteria are not met.

> Sensitisation:

Species	Evaluation	Method
	May cause sensitization	n of susceptible persons by skin contact.

REG_NOAM 13/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

> Aspiration hazard:

No data available

Sub-acute, sub-chronic and chronic toxicity

> Repeated dose toxicity:

No data available

> Specific target organ toxicity (STOT):

May cause damage to organs through prolonged or repeated exposure.

- > CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
- Carcinogenicity

Based on available data, the classification criteria are not met.

- Mutagenicity

Based on available data, the classification criteria are not met.

- Genetic toxicity in vitro

No data available

- Genetic toxicity in vivo

No data available

- Teratogenicity

Based on available data, the classification criteria are not met.

- Toxicity to reproduction

Based on available data, the classification criteria are not met.

> Summarised evaluation of the CMR properties:

Carcinogenicity : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Teratogenicity : Based on available data, the classification criteria are not met.

Toxicity to reproduction : Based on available data, the classification criteria are not met.

Experiences made in practice:

2-(2-Vinyloxyethoxy) ethyl acrylate

May be harmful by inhalation, ingestion, skin adsorption.

REG_NOAM 14/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available

N-vinyl caprolactam

For industrial applications, there are no data available.

Isodecyl acrylate

No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Suspected of damaging fertility or the unborn child.

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

No data available

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

No data available

Cupferron Al

No data available

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

May cause eye irritation with susceptible persons. May cause irritation of respiratory tract.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	6.8 mg/l
	Method	: OECD Test	Guideline 203	_
Toxicity to fish	NOEC	96 h	Brachidanio rerio (zebra fish)	2.2 mg/l
	Method	: OECD Test	Guideline 203	_
Toxicity to fish	LC100	96 h	Brachidanio rerio (zebra fish)	10 mg/l
	Method	: OECD Test	Guideline 203	_
Toxicity to daphnia	EC50	48 h	Daphnia magna	55 mg/l
	Method	: OECD Test	Guideline 202	_
Toxicity to daphnia	EC100	48 h	Daphnia magna	100 mg/l
	Method	: OECD Test	Guideline 202	_
Toxicity to daphnia	NOEC	48 h	Daphnia magna	25 mg/l
	Method	: OECD Test	Guideline 202	_
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	5 mg/l
			(algae)	_
	Method	: OECD Test	Guideline 201	
Toxicity to algae	NOEC	72 h	scenedesmus subspicatus	0.78 mg/l
	Method	: OECD Test	Guideline 201	_
Toxicity to algae	LOEC	72 h	scenedesmus subspicatus	2.7 mg/l
, ,	Method	: OECD Test	Guideline 201	_
Toxicity to bacteria	IC50	3 h		741 mg/l
<u>-</u>				

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Method: OECD-Guideline No.209; 88/302/EEC C.11

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	NOAE	96 h	Leuciscus idus	1 mg/l
	L			
	Method:	Static		
	experime	ental result		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	2.15 to 4.64 mg/l
	Method:	Literature.		
	Based o	n available d	ata, the classification criteria are not met	•
Toxicity to algae	EC50	72 h	Algae	< 16.7 mg/l
	Method:	Literature.		
	Based o	n available d	ata, the classification criteria are not met	•
Toxicity to bacteria				
-	No data	available		

N-vinyl caprolactam

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	318 mg/l
	Method	: OECD Test	Guideline 203	
	Based of	on available d	lata, the classification criteria are not met.	
Toxicity to daphnia	EC50	48 h	Daphnia magna	> 100 mg/l
·	Method	: OECD Test	Guideline 202	J
	Based of	on available d	lata, the classification criteria are not met.	
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	> 100 mg/l
, ,			(algae)	J
	Method	: Literature.		
	Based of	on available d	lata, the classification criteria are not met.	
Toxicity to bacteria	EC50	16 h	Pseudomonas putida	622 mg/l
•			(bacteria)	· ·
	Method	: OECD-Guid	leline No.209; 88/302/EEC C.11	
			lata, the classification criteria are not met.	

Isodecyl acrylate

	Effect	Exposure	Species	Value
	dose	time	•	
Toxicity to fish	LC50	96 h	Oncorhynchus mykiss (rainbow trout)	1.81 mg/l
	Method	: OECD Test	Guideline 203	
Toxicity to fish	NOEC	96 h	Oncorhynchus mykiss (rainbow trout)	0.381 mg/l
	Method	: OECD Test	Guideline 203	
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	1.3 mg/l
	Method	: OECD Test	Guideline 202	
Toxicity to algae	EC50	72 h	Desmodesmus subspicatus (algae)	1.71 mg/l

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ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

	Method:	Literature		
Toxicity to algae	NOEC	72 h	Desmodesmus subspicatus	0.45 mg/l
			(algae)	
	Method:	OECD Te	st Guideline 201	
Toxicity to bacteria	EC50	0.5 h	Pseudomonas putida	> 10,000 mg/l
			(bacteria)	_
	Method:	Literature	•	

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	< 100.00 mg/l
	Method	: Literature.		
Toxicity to daphnia	EC0	48 h	Daphnia magna (water flea)	< 100.00 mg/l
	Method: Literature.			
Toxicity to daphnia	EC50	48 h	Daphnia	3.53 mg/l
	Method	: Literature.	·	_
Toxicity to algae	EC50	72 h	Algae	> 1,000 mg/l
	Method	: Literature.	•	
Toxicity to bacteria	EC50	17 h	Bacteria	> 500.00 mg/l
•	Method	: Literature.		· ·

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose	Exposure time	Species	Value
Toxicity to fish	No data	available		
Toxicity to daphnia				
Toxicity to algae	No data	available		
Toxicity to bacteria	No data	available		
TOXIONY TO DACTETIA	No data	available		

Caprolactam

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	48 h	Salmo gairdneri (rainbow trout)	> 500 mg/l
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	> 500 mg/l
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus (algae)	130 mg/l
Toxicity to bacteria	EC50	17 h	Pseudomonas putida (bacteria)	4,200 mg/l

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

	Effect dose	Exposure time	Species	Value
Toxicity to fish		96 h	Pisces (fish)	28.5 mg/l
	Method:	Literature.		

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Toxicity to fish	LC50	96 h	Pimephales promelas (fathead minnow)	110 mg/l
	Method:	Literature.	,	
	Based o	n available	data, the classification criteria are not met.	
Toxicity to daphnia				
	No data	available		
Toxicity to algae				
	No data	available		
Toxicity to bacteria	EC50	0.5 h		4.61 mg/l
	Method:	Literature.		

Cupferron Al

·	Effect dose	Exposure time	Species	Value
Toxicity to fish	No data	available		
Toxicity to daphnia				
Toxicity to algae	No data	available		
	No data	available		
Toxicity to bacteria	No data	available		

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	48 h	Oryzias latipes (rice fish)	5.3 mg/l
	Method	: Literature.		_
Toxicity to daphnia	EC50	48 h		0.48 mg/l
	Method	: OECD Test	Guideline 202	_
Toxicity to algae	EC50	96 h	Algae	0.758 mg/l
	Method	: Literature.	_	-
Toxicity to bacteria				
•	No data	available		

12.2 Persistence and degradability:

Physico-chemical removability

Chemical Oxygen Demand (COD)

No data available

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

No data available

REG_NOAM 18/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Biochemical Oxygen Demand (BOD)

No data available

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

No data available

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil:

No information available.

Henry's constant

Value	Temperature	Method
		No information available.

Transport between environmental compartments

No data available

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer. Avoid infiltration in to drinking supplies, waste water or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Recover nonusable free liquid and/or contaminated water, and dispose of in an approved and permitted treatment system. Discharge to sewer may require approval of permitting authority and may require pretreatment.

US. RCRA Hazardous Waste Classification (40 CFR 261)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

Not regulated according to IMO/IMDG.

Not regulated according to ICAO/IATA aircraft only.

Not regulated according to ICAO/IATA passenger and cargo aircraft.

Not Regulated according to US Department of Transportation (DOT) 49 CFR

Not regulated according to Transport of Dangerous Goods (TDG)

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S, EPA TSCA) inventory.

US. OSHA Classification

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

US. SARA 311/312 Hazard Categories

Acute (Immediate) Chronic (Delayed)

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

		CAS-No.	<u>Concentra</u>	ation [%]
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

		CAS-No.	<u>Concentra</u>	<u>tion</u> [%]
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5
•	2,6-bis(1,1-dimethylethyl)-	128-37-0	>= 0.0 -	<= 0.0
	4-methyl-phenol			

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

REG_NOAM 20/22 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

SUBID:000001014003

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Caprolactam

Caprolactam

<u>CAS-No.</u> <u>Concentration</u> [%] 105-60-2 >= 0.1 - <= 0.5

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

<u>CAS-No.</u> <u>Concentration</u> [%] 105-60-2 >= 0.1 - <= 0.5

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists: See Section 2.

Canadian WHMIS Classification

E : Corrosive Material

Canadian Environmental Protection Act (CEPA)

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

· modified polyacrylate

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

Цара	Harmful if swallowed.
H302	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

This MSDS is replacing Agfa MSDS number 1533G

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 MAGENTA INK

Version 1

Revision Date 09-28-2015

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Agfa Corporation. The data on this SDS relates only to the specific material designated herein. Agfa Corporation assumes no legal responsibility for use or reliance upon these data. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or mixture:

Product name : ARIGI UV K3 YELLOW INK

MSDS Number : 000001014004

1.2 Use of the substance/mixture:

Use of the : Printer ink

Substance/Preparation

1.3 Company/undertaking identification

Agfa Corporation 611 River Drive Center 3

Elmwood Park, NJ 07407

U.S.A.

Transport Emergency Non-transportation

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS (Globally Harmonized System of Classification and Labelling of Chemicals)		
 Hazard classes 	Skin irritation	
Hazard categories	Category 2	
Hazard statements	H315	
Hazard classes	Serious eye damage	
Hazard categories	Category 1	
Hazard statements	H318	
 Hazard classes 	Skin sensitizer	
Hazard categories	Category 1	
Hazard statements	H317	
Hazard classes	Specific target organ toxicity - repeated exposure	
Hazard categories	Category 1	
Hazard statements	H372	
Hazard classes	Chronic hazards to the aquatic environment	
Hazard categories	Category 3	
Hazard statements	H412	

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015

2.2 Label elements:

Hazardous components which must be listed on the label:

 CAS-No. 57472-68-1 Oxybis(methyl-2,1-ethanediyl) diacrylate

> 86273-46-3 2-(2-Vinyloxyethoxy) ethyl acrylate

2235-00-9 N-vinvl caprolactam 1330-61-6 Isodecyl acrylate

Symbol(s)







GHS08

GHS05

GHS07

Signal word **DANGER** Hazard H315

statements

H317 May cause an allergic skin reaction. H318 Causes serious eye damage.

Causes skin irritation.

H372 Causes damage to organs (or state all organs affected, if

known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of

exposure cause the hazard).

Harmful to aquatic life with long lasting effects. H412 Do not breathe dust/fume/gas/mist/vapours/spray. P260

Precautionary statements:

prevention

statements:

response

P280 Wear protective gloves/protective clothing/eye protection/face

protection.

Avoid release to the environment. P273

Precautionary P305+P351+P

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to remove. 338

Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/...

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Printer ink, mainly consisting of:

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

REG NOAM 2/17 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



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ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Hazardous components

• 2-(2-Vinyloxyethoxy) ethyl acrylate Concentration [%]: 40.00 - 60.00

CAS-No. : 86273-46-3

Hazard classes : Acute toxicity Oral, Skin sensitizer, Chronic hazards to the aquatic

environment

Hazard categories : Category 4, Category 1, Category 3

Hazard statements : H302, H317, H412

• N-vinyl caprolactam Concentration [%]: 10.00 - 20.00

CAS-No. : 2235-00-9

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer, Specific

target organ toxicity - repeated exposure Inhalation

Hazard categories : Category 4, Category 2, Category 1B, Category 1

Hazard statements : H302, H319, H317, H372

CAS-No. : 57472-68-1

Hazard classes : Skin irritation, Serious eye damage, Skin sensitizer

Hazard categories : Category 2, Category 1, Category 1

Hazard statements : H315, H318, H317

• Isodecyl acrylate Concentration [%]: 5.00 - 10.00

CAS-No. : 1330-61-6

Hazard classes : Serious eye irritation, Specific target organ toxicity - single

exposure, Skin irritation, Chronic hazards to the aquatic

environment

Hazard categories : Category 2, Category 3, Category 2

Hazard statements : H319, H335, H315, H411

• 2-Propenoic acid ,1-6-hexanediyl Concentration [%]: 5.00 - 10.00

ester, polymer with 2-aminoethanol

CAS-No. : 67906-98-3

Hazard classes : Skin irritation, Serious eye irritation

Hazard categories : Category 2, Category 2

Hazard statements : H315, H319

• Phosphine oxide, diphenyl(2,4,6- Concentration [%]: 1.00 - 3.00

trimethylbenzoyl)-

CAS-No. : 75980-60-8

Hazard classes : Toxic to reproduction, Chronic hazards to the aquatic environment,

Skin sensitizer

Hazard categories : Category 2, Category 2, Category 1

Hazard statements : H361f, H411, H317

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine Concentration [%]: 1.00 - 5.00

oxide

CAS-No. : 162881-26-7

Hazard classes : Skin sensitizer, Chronic hazards to the aquatic environment

Hazard categories : Category 1A, Category 4

Hazard statements : H317, H413

Components with a community workplace exposure limit

This product does not contain components with a community exposure limit.

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ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

Eye contact : Immediately flush eye(s) with plenty of water. Consult an oculist if

necessary.

Skin contact : Immediately flush with plenty of water for at least 15 minutes while

removing contaminated clothing and shoes. Get medical attention if

symptoms occur.

Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary.

Do not induce vomiting.

Inhalation : Take patient to fresh air if necessary. Consult a physician if

necessary.

4.2 Most important symptoms and effects:

Symptoms : Upon contact with skin: redness, pain. In case of eye contact:

redness and pain. Ingestion can cause nausea, vomiting and

diarrhea. May cause headache and dizziness.

4.3 Indication of immediate medical attention and special treatment needed:

General advice : Call a physician immediately.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : All extinguishing media are suitable.

5.2 Special hazards arising from the substance or mixture:

Specific hazards during fire

fighting

: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire

fighting

: Toxic and irritating gases/fumes may be given off during burning or

thermal decomposition.

Further information : Collect contaminated fire extinguishing water separately. This must

not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment

for fire-fighters

: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

Special protective equipment for fire-fighters

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

REG_NOAM 4/17 EN

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ARIGI UV K3 YELLOW INK

SUBID:000001014004

Print Date 04-20-2017 Version 1

Revision Date 09-28-2015

Use cold water spray to cool fire-exposed containers to minimize the

risk of rupture.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions : Cleanup personnel must use appropriate personal protective

equipment.

Additional advice : Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions : The product should not be allowed to enter drains, water courses or

the soil.

6.3 Methods and material for containment and cleaning up:

: Dike the spill if necessary. If spill occurs, apply a suitable absorbent Methods for cleaning up

material and collect into an impervious waste container. Collect the

product in a plastic vessel. Carefully collect leftovers.

6.4 Reference to other sections:

For waste disposal see section 13. For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling : Prevent product from diffusing.

Hygiene measures : Employees should wash their hands and face before eating,

> drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and

eye wash stations should be available.

: Employees should wash their hands and face before eating, Hygiene measures

> drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and

eve wash stations should be available.

Advice on protection against

fire and explosion

: No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage

areas and containers

: Keep container tightly closed. Keep in a dry place.

conditions

Further information on storage : Keep container in a well-ventilated place.

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

Air limit values (US)

We are not aware of any national exposure limit.

Air limit values (CA)

We are not aware of any national exposure limit.

Biological limit values (US)

We are not aware of any national exposure limit.

Biological limit values (CA)

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

8.2 Exposure controls:

Occupational exposure controls:

> Instruction measures to prevent exposure:

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

> Technical measures to prevent exposure:

Ensure adequate ventilation.

> Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not

required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard

Z94.4-02.

Hand protection : Use chemical resistant gloves. In case of prolonged immersion or

frequently repeated contact use gloves made of the materials: butylrubber (thickness >= 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the

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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

specifications of EC directive 89/686/EC and the resultant standard

EN374.

Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of

types of use are prescribed by the manufacturer.

Eye protection Safety goggles. EN 166.

Body Protection Safety clothes: long sleeved clothing EN13688

Educate and train employees in the safe use and handling of this Personal protective equipment

product. Emergency showers and eye wash stations should be

available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:

State of matter Liquid Liquid. Form Color Yellow

Odor : Sweetish smell Odor threshold : No data available

9.1.2 Important health, safety and environmental information:

рΗ Not applicable

< 0 °C Melting point/range Method: Literature. : > 100 °C Boiling point/range Method: Literature. : > 100 °C Flash point Method: Literature.

Autoignition temperature No data available Vapour pressure No data available Relative vapour density No data available

1.043 Relative density Method: Literature.

Density No data available Solubility/qualitative Immiscible with water. Water solubility No data available : No data available Partition coefficient (n-

octanol/water)

Viscosity, dynamic : No data available Viscosity, kinematic No data available Lower explosion limit No data available Upper explosion limit No data available : No data available Evaporation rate

Flammability (solid, gas) : Not flammable. Method: Literature.

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ARIGI UV K3 YELLOW INK

SUBID:000001014004

ΕN

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

9.2 Other information:

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity : Reactivity is not to be expected under normal conditions of

temperature and pressure.

10.2 Chemical stability:

Stability : The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:

Hazardous reactions : The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:

Conditions to avoid : No data available

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition

products

: No specified dangerous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics, metabolism and distribution:

No data available

Acute effects (toxicity tests):

> Acute Toxicity

REG NOAM

• 2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,790 mg/kg	OECD Test Guideline 401
Acute oral toxicity	LD50	rat	2,026 mg/kg	OECD Test Guideline 401

8/17

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Acute dermal toxicity	Based on LD50	available data, rat	the classification criteria > 2,000 mg/kg	are not met. OECD Test Guideline 402
Acute inhalation toxicity	Based on LC50	available data, rat	the classification criteria 5.82 mg/l/ 4 h	

N-vinyl caprolactam

	Effect dose	Species	Value Method	
Acute oral toxicity	LD50	rat	ca. 1,400 mg/kg Literature.	
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg Literature.	
	Based on av	ailable data	, the classification criteria are not met.	
Acute inhalation toxicity	LC50	rat		
	It was demoi respirable as		t during intended and foreseen applications, ned.	no

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	4,600 mg/kg Literature.
	Based on av	ailable data	the classification criteria are not met.
Acute dermal toxicity	LD 50	Rabbit	> 2,000 mg/kg
Acute inhalation toxicity	LC 0	Rat	0.41 mg/l/ 7 h
·	Vapor		-

Isodecyl acrylate

	Effect dose	Species	Value Method
Acute oral toxicity	LD 50	Rat	+/- 4,435 mg/kg
Acute dermal toxicity	LD 50	Rabbit	7,522 mg/kg
Acute inhalation toxicity	LC 50	Rat	> 1.19 mg/l/ 8 h
	Vapor		_

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose Species	Value	Method
Acute oral toxicity			
_	No data available		
Acute dermal toxicity			
,	No data available		
Acute inhalation toxicity			
_	No data available		

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg	Literature.
	Based on av	ailable data,	the classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	Literature.
	Based on av	ailable data,	the classification criteria	are not met.
Acute inhalation toxicity				
	No data avai	ilable		

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

REG_NOAM	9/17	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				401
	Based on ava	ailable data, t	the classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on ava	ailable data, t	the classification criteria	are not met.
Acute inhalation toxicity				
	No data avai	lable		

> Specific target organ toxicity (STOT):

Specific effects	Affected organs
Based on available data, the classification criteria are not met.	

> Irritant and corrosive effects:

Exposure time	Species	Evaluation	Method	
Irritating to	skin.			
Risk of seri	ous damage	to eyes.		
	Irritating to	Irritating to skin.	time	Irritating to skin.

> Irritation to the respiratory tract:

Based on available data, the classification criteria are not met.

> Sensitisation:

Species	Evaluation	Method
	May cause sensitization of su	sceptible persons by skin contact.

> Aspiration hazard:

No data available

Sub-acute, sub-chronic and chronic toxicity

> Repeated dose toxicity:

No data available

> Specific target organ toxicity (STOT):

May cause damage to organs through prolonged or repeated exposure.

> CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

REG_NOAM 10/17 EN	EN	EG_NOAM	REG_NOAM	REG_NOAM	REG_NOAM
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

- Carcinogenicity

Based on available data, the classification criteria are not met.

- Mutagenicity

Based on available data, the classification criteria are not met.

- Genetic toxicity in vitro

No data available

- Genetic toxicity in vivo

No data available

- Teratogenicity

Based on available data, the classification criteria are not met.

- Toxicity to reproduction

Based on available data, the classification criteria are not met.

> Summarised evaluation of the CMR properties:

Carcinogenicity : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Teratogenicity : Based on available data, the classification criteria are not met.

Toxicity to reproduction : Based on available data, the classification criteria are not met.

Experiences made in practice:

• 2-(2-Vinyloxyethoxy) ethyl acrylate

May be harmful by inhalation, ingestion, skin adsorption.

N-vinyl caprolactam

For industrial applications, there are no data available.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available

Isodecyl acrylate

No data available

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Suspected of damaging fertility or the unborn child.

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Inhalation of aerosol or skin contact may cause sensitisation of susceptible persons.

REG_NOAM 11/17 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

• 2-(2-Vinyloxyethoxy) ethyl acrylate

• 2-(2-VIIIyl0xyeti10		
	Effect Exposure Species	Value
	dose time	
Toxicity to fish	LC50 96 h Brachidanio rerio (zebra fish)	6.8 mg/l
	Method: OECD Test Guideline 203	
Toxicity to fish	NOEC 96 h Brachidanio rerio (zebra fish)	2.2 mg/l
_	Method: OECD Test Guideline 203	-
Toxicity to fish	LC100 96 h Brachidanio rerio (zebra fish)	10 mg/l
	Method: OECD Test Guideline 203	· ·
Toxicity to daphnia	EC50 48 h Daphnia magna	55 mg/l
, ,	Method: OECD Test Guideline 202	· ·
Toxicity to daphnia	EC100 48 h Daphnia magna	100 mg/l
' '	Method: OECD Test Guideline 202	3
Toxicity to daphnia	NOEC 48 h Daphnia magna	25 mg/l
, ,	Method: OECD Test Guideline 202	· ·
Toxicity to algae	EC50 72 h Scenedesmus subspicatus	5 mg/l
	(algae)	· ·
	Method: OECD Test Guideline 201	
Toxicity to algae	NOEC 72 h scenedesmus subspicatus	0.78 mg/l
	Method: OECD Test Guideline 201	J
Toxicity to algae	LOEC 72 h scenedesmus subspicatus	2.7 mg/l
l i i j i i i g	Method: OECD Test Guideline 201	3
Toxicity to bacteria	IC50 3 h	741 mg/l
	Method: OECD-Guideline No.209; 88/302/EEC C.11	.

N-vinyl caprolactam

	Effect	Exposure	Species	Value	
	dose	time			
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	318 mg/l	
	Method:	OECD Test	Guideline 203		
	Based o	n available c	lata, the classification criteria are not met.		
Toxicity to daphnia	EC50	48 h	Daphnia magna	> 100 mg/l	
	Method:	OECD Test	Guideline 202		
	Based o	n available c	lata, the classification criteria are not met.		
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	> 100 mg/l	
			(algae)		
	Method:	Literature.	· · · ·		
	Based o	n available d	lata, the classification criteria are not met.		
Toxicity to bacteria	EC50	16 h	Pseudomonas putida	622 mg/l	
			(bacteria)		
	Method: OECD-Guideline No.209; 88/302/EEC C.11				
	Based o	n available c	lata, the classification criteria are not met.		

REG_NOAM 12/17 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	NOAE L	96 h	Leuciscus idus	1 mg/l
	Method	Static		
	experim	ental result		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	2.15 to 4.64 mg/l
	Method	Literature.		
	Based of	n available d	lata, the classification criteria are not met	
Toxicity to algae	EC50	72 h	Algae	< 16.7 mg/l
	Method:	Literature.		
	Based of	n available d	lata, the classification criteria are not met	
Toxicity to bacteria				
	No data	available		

Isodecyl acrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Oncorhynchus mykiss	1.81 mg/l
			(rainbow trout)	
	Method	: OECD Test	Guideline 203	
Toxicity to fish	NOEC	96 h	Oncorhynchus mykiss	0.381 mg/l
			(rainbow trout)	
	Method	: OECD Test	Guideline 203	
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	1.3 mg/l
	Method	: OECD Test	Guideline 202	
Toxicity to algae	EC50	72 h	Desmodesmus subspicatus	1.71 mg/l
			(algae)	_
	Method	: Literature.		
Toxicity to algae	NOEC	72 h	Desmodesmus subspicatus	0.45 mg/l
			(algae)	
	Method	: OECD Test	Guideline 201	
Toxicity to bacteria	EC50	0.5 h	Pseudomonas putida	> 10,000 mg/l
			(bacteria)	
	Method	: Literature.		

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish				
	No data	available		
Toxicity to daphnia				
	No data	available		
Toxicity to algae				
	No data	available		
Toxicity to bacteria				
,	No data	available		

REG_NOAM 13/17 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	< 100.00 mg/l
	Method	: Literature.		_
Toxicity to daphnia	EC0	48 h	Daphnia magna (water flea)	< 100.00 mg/l
	Method	: Literature.		_
Toxicity to daphnia	EC50	48 h	Daphnia	3.53 mg/l
	Method	: Literature.		_
Toxicity to algae	EC50	72 h	Algae	> 1,000 mg/l
	Method	: Literature.	_	_
Toxicity to bacteria	EC50	17 h	Bacteria	> 500.00 mg/l
	Method	: Literature.		

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	> 0.09 mg/l
	Method	: OECD Test	Guideline 203	_
Toxicity to daphnia	EC50	48 h	Daphnia magna	> 1,175 mg/l
	Method	: OECD Test	Guideline 202	_
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	> 0.26 mg/l
			(algae)	_
	Method	: OECD Test	Guideline 201	
Toxicity to bacteria	EC50	3 h	Bacteria	> 100 mg/l
-	Method	: OECD-Guid	leline No.209; 88/302/EEC C.11	-

12.2 Persistence and degradability:

Physico-chemical removability

Chemical Oxygen Demand (COD)

No data available

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

No data available

Biochemical Oxygen Demand (BOD)

No data available

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

No data available

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil:

No information available.

Henry's constant

Value	Temperature	Method
		No information available.

Transport between environmental compartments

No data available

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer. Avoid infiltration in to drinking supplies, waste water or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Recover nonusable free liquid and/or contaminated water, and dispose of in an approved and permitted treatment system. Discharge to sewer may require approval of permitting authority and may require pretreatment.

Empty containers.

Recondition or dispose of empty container in accordance with governmental regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261)

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

REG_NOAM 15/17 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

Not regulated according to IMO/IMDG.

Not regulated according to ICAO/IATA aircraft only.

Not regulated according to ICAO/IATA passenger and cargo aircraft.

Not Regulated according to US Department of Transportation (DOT) 49 CFR

Not regulated according to Transport of Dangerous Goods (TDG)

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

2-(2-Vinyloxyethoxy) ethyl

acrylate

2-(2-Vinyloxyethoxy) ethyl : y acrylate

acrylate

N-vinyl caprolactam : y
 Oxybis(methyl-2,1- : y
 ethanediyl) diacrylate

ethanediyl) diacrylate

Isodecyl acrylate

Isodecyl acrylate : y
 2-Propenoic acid ,1-6- : y
 hexanediyl ester,polymer with 2-aminoethanol

• Phosphine oxide, : y

diphenyl(2,4,6-trimethylbenzoyl)-

 phenyl bis(2,4,6trimethylbenzoyl) y (positive listing)

phosphine oxide

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists: See Section 2.

Canadian Environmental Protection Act (CEPA)

• 2-(2-Vinyloxyethoxy) ethyl : DSL:y

acrylate

N-vinyl caprolactam : DSL : yOxybis(methyl-2,1- : DSL : y

ethanediyl) diacrylate

Isodecyl acrylate : DSL: y2-Propenoic acid ,1-6- : DSL: y

hexanediyl ester,polymer with 2-aminoethanol

REG_NOAM 16/17 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 YELLOW INK

SUBID:000001014004

Version 1 Print Date 04-20-2017

Revision Date 09-28-2015

 Phosphine oxide, diphenyl(2,4,6trimethylbenzoyl)- : DSL:y

phenyl bis(2,4,6-

: DSL : y (positive listing)

trimethylbenzoyl)phosphine oxide

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

This MSDS is replacing Agfa MSDS number 1176G

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Agfa Corporation. The data on this SDS relates only to the specific material designated herein. Agfa Corporation assumes no legal responsibility for use or reliance upon these data. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

REG_NOAM 17/17 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Print Date 02-17-2017 Version 1

Revision Date 09-28-2015

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or mixture:

Product name : ARIGI UV K3 BLACK INK

MSDS Number : 000001014005

1.2 Use of the substance/mixture:

Use of the : Printer ink

Substance/Preparation

1.3 Company/undertaking identification

Agfa Corporation 611 River Drive Center 3

Elmwood Park, NJ 07407

U.S.A.

Transport Emergency Non-transportation

Call CHEMTREC: +1 800 4249300 Health Emergency Phone: +1 303 6235716 Agfa Information Phone: +1 201 4402500 International: +1 703 5273887

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS (Globally Harmonized Sys	GHS (Globally Harmonized System of Classification and Labelling of Chemicals)				
Hazard classes	Skin irritation				
Hazard categories	Category 2				
Hazard statements	H315				
 Hazard classes 	Serious eye damage				
Hazard categories	Category 1				
Hazard statements	H318				
 Hazard classes 	Skin sensitizer				
Hazard categories	Category 1				
Hazard statements	H317				
Hazard classes	Specific target organ toxicity - repeated exposure				
Hazard categories	Category 1				
Hazard statements	H372				

2.2 Label elements:

Hazardous components which must be listed on the label:

Symbol(s)

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Print Date 02-17-2017 Version 1

Revision Date 09-28-2015







Hazard statements : H315

Causes skin irritation.

H317

May cause an allergic skin reaction. Causes serious eye damage. H318

H372

Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of

exposure cause the hazard).

Precautionary statements: prevention

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P270 P264

Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

P280

Wear protective gloves/protective clothing/eye protection/face

protection.

P272

Contaminated work clothing should not be allowed out of the

workplace.

Precautionary statements:

response

P302+P352

IF ON SKIN: Wash with plenty of water/...

If skin irritation or rash occurs: Get medical advice/attention. P333+P313 Take off contaminated clothing. P362

P363

Wash contaminated clothing before reuse.

P305+P351+P

IF IN EYES: Rinse cautiously with water for several minutes.

338

Remove contact lenses, if present and easy to remove.

Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/... Get medical advice/attention if you feel unwell. P314

Precautionary statements:

disposal

P501NA

Dispose of contents / container to an approved waste

disposal facility.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture related information:

Printer ink, mainly consisting of:

3.2 Hazard ingredients:

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 2.1.

REG NOAM ΕN 2/23

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Hazardous components

• 2-(2-Vinyloxyethoxy) ethyl acrylate Concentration [%]: 40.00 - 60.00

CAS-No. : 86273-46-3

Hazard classes : Acute toxicity Oral, Skin sensitizer, Chronic hazards to the aquatic

environment

Hazard categories : Category 4, Category 1, Category 3

Hazard statements : H302, H317, H412

• N-vinyl caprolactam Concentration [%]: 10.00 - 20.00

CAS-No. : 2235-00-9

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer, Specific

target organ toxicity - repeated exposure Inhalation

Hazard categories : Category 4, Category 2, Category 1B, Category 1

Hazard statements : H302, H319, H317, H372

• Isodecyl acrylate Concentration [%]: 5.00 - 10.00

CAS-No. : 1330-61-6

Hazard classes : Serious eye irritation, Specific target organ toxicity - single

exposure, Skin irritation, Chronic hazards to the aquatic

environment

Hazard categories : Category 2, Category 3, Category 2, Category 2

Hazard statements : H319, H335, H315, H411

• 2-Propenoic acid ,1-6-hexanediyl Concentration [%]: 5.00 - 10.00

ester, polymer with 2-aminoethanol

CAS-No. : 67906-98-3

Hazard classes : Skin irritation, Serious eye irritation

Hazard categories : Category 2, Category 2

Hazard statements : H315, H319

• Phosphine oxide, diphenyl(2,4,6- Concentration [%]: 1.00 - 5.00

trimethylbenzoyl)-

CAS-No. : 75980-60-8

Hazard classes : Toxic to reproduction, Chronic hazards to the aquatic environment,

Skin sensitizer

Hazard categories : Category 2, Category 2, Category 1

Hazard statements : H361f, H411, H317

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine Concentration [%]: 1.00 - 5.00

oxide

CAS-No. : 162881-26-7

Hazard classes : Skin sensitizer, Chronic hazards to the aquatic environment

Hazard categories : Category 1A, Category 4

Hazard statements : H317, H413

• Oxybis(methyl-2,1-ethanediyl) diacrylate Concentration [%]: 1.00 - 5.00

CAS-No. : 57472-68-1

Hazard classes : Skin irritation, Serious eye damage, Skin sensitizer

Hazard categories : Category 2, Category 1, Category 1

Hazard statements : H315, H318, H317

• Carbon Black (carbon) Concentration [%]: 1.00 - 5.00

CAS-No. : 1333-86-4

REG_NOAM 3/23 EN

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ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Hazard classes : Carcinogenicity
Hazard categories : Category 2
Hazard statements : H351

• Caprolactam Concentration [%]: 0.10 - 0.50

CAS-No. : 105-60-2

Hazard classes : Acute toxicity Oral, Acute toxicity Inhalation, Serious eye irritation,

Specific target organ toxicity - single exposure Inhalation, Skin

irritation

Hazard categories : Category 4, Category 2, Category 3, Category 2

Hazard statements : H302, H332, H319, H335, H315

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol Concentration [%]: 0.10 - 0.50

CAS-No. : 128-37-0

Hazard classes : Acute hazards to the aquatic environment, Chronic hazards to the

aquatic environment

Hazard categories : Category 1, Category 1

Hazard statements : H400, H410

• mequinol; 4-methoxyphenol; hydroquinone Concentration [%]: 0.01 - 0.05

monomethyl ether

CAS-No. : 150-76-5

Hazard classes : Acute toxicity Oral, Serious eye irritation, Skin sensitizer

Hazard categories : Category 4, Category 2, Category 1

Hazard statements : H302, H319, H317

• Cupferron Al Concentration [%]: 0.01 - 0.05

CAS-No. : 15305-07-4

Hazard classes : Germ cell mutagenicity

Hazard categories : Category 2 Hazard statements : H341

Components with a community workplace exposure limit

Carbon Black (carbon)

Caprolactam

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Cupferron Al

M-factor

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

Acute hazards to the aquatic environment : 1
Chronic hazards to the aquatic environment : 1

3.3 Remark:

Full text of each relevant H-phrase is listed in section 16.

REG_NOAM 4/23 EN

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ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures:

Eye contact : If in eyes, hold eyes open, flood with water for at least 15 minutes

and see a doctor. In case of irritation from airborne exposure, move

to fresh air.

Skin contact : Immediately flush with plenty of water for at least 15 minutes while

removing contaminated clothing and shoes.

Ingestion : Rinse mouth with plenty of water. Consult a physician if necessary.

Do not induce vomiting.

Inhalation : Take patient to fresh air if necessary. Consult a physician if

necessary.

4.2 Most important symptoms and effects:

Symptoms : Upon contact with skin: redness, pain. In case of eye contact:

redness and pain. Ingestion can cause nausea, vomiting and

diarrhea. May cause headache and dizziness.

4.3 Indication of immediate medical attention and special treatment needed:

General advice : Call a physician immediately.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : All extinguishing media are suitable.

5.2 Special hazards arising from the substance or mixture:

Specific hazards during fire

fighting

: Toxic and irritating gases/fumes may be given off during burning or

thermal decomposition.

Further information : Collect contaminated fire extinguishing water separately. This must

not be discharged into drains.

5.3 Advice for fire-fighters:

Special protective equipment

for fire-fighters

: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

nak or rupture

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Personal precautions : Cleanup personnel must use appropriate personal protective

REG_NOAM 5/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

equipment.

Additional advice : Observe normal precautions when handling chemicals.

6.2 Environmental precautions:

Environmental precautions : The product should not be allowed to enter drains, water courses or

the soil.

6.3 Methods and material for containment and cleaning up:

Methods for cleaning up : Dike the spill if necessary. If spill occurs, apply a suitable absorbent

material and collect into an impervious waste container. Collect the

product in a plastic vessel. Carefully collect leftovers.

6.4 Reference to other sections:

For waste disposal see section 13. For personal protection see section 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Advice on safe handling : Prevent product from diffusing.

Hygiene measures : Employees should wash their hands and face before eating,

> drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and

eye wash stations should be available.

Advice on protection against

fire and explosion

: No special protective measures against fire and explosion required.

7.2 Conditions for safe storage:

Requirements for storage

areas and containers

: Keep container tightly closed. Keep in a dry place.

conditions

Further information on storage : Keep container in a well-ventilated place.

7.3 Specific end use:

This substance is used only by trained professionals under restricted conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Components with occupational exposure limits rsp. biological occupational exposure limits requiring monitoring:

8.1.1.1 Occupational exposure limits:

REG NOAM 6/23 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

CAS-No.: 128-37-0

CAS-No.: 150-76-5

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Air limit values (US)

Carbon Bi	lack (carbon)			CAS-No.: 1333-86-4
Basis	Revision	Value	Type	
	Date		• •	
NIOSH	06 1997	3.5 mg/m3	REL	
NIOSH	06 1997	0.1 mg/m3	REL	
OSHA Z1	06 1993	3.5 mg/m3	PEL	
OSHA Z1A	1989	3.5 mg/m3	TWA	
TN OEL	06 2008	3.5 mg/m3	TWA	
ACGIH	12 2010	3 mg/m3	TWA	

CAS-No.: 105-60-2 Caprolactam

• Ouproluoi				0/10 110:: 100 00 Z
Basis	Revision	Value	Туре	
	Date			
OSHA Z1A	1989	1 mg/m3	TWA	
OSHA Z1A	1989	20 mg/m3	TWA	
		5 ppm		
OSHA Z1A	1989	40 mg/m3	STEL	
		10 ppm		
OSHA Z1A	1989	3 mg/m3	STEL	
ACGIH	01 2005	5 mg/m3	TWA	
ACGIH	01 2005	5 mg/m3	TWA	
TN OEL	06 2008	20 mg/m3	TWA	
		5 ppm		
TN OEL	06 2008	1 mg/m3	TWA	
TN OEL	06 2008	40 mg/m3	STEL	
		10 ppm		
TN OEL	06 2008	3 mg/m3	STEL	

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

Basis	Revision	Value	Туре
	Date		
NIOSH	06 1997	10 mg/m3	REL
ACGIH	01 2005	2 mg/m3	TWA
ACGIH	01 2005	2 mg/m3	TWA
TN OEL	06 2008	10 mg/m3	TWA
US CA OEL	02 2012	10 mg/m3	TWA PEL

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Cirici				
Basis	Revision	Value	Type	
	Date			
ACGIH	2004	5 mg/m3	TWA	
NIOSH	06 1997	5 mg/m3	REL	
TN OEL	06 2008	5 mg/m3	TWA	
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REG_NOAM	7/23	EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

 Cupferron Al CAS-No.: 15305-07-4

Basis	Revision Date	Value	Туре
ACGI	1 03 2014	1 mg/m3	TWA

Air limit values (CA)

 Carbon Bl 	ack (carbon)			CAS-No.: 1333-86-4
Basis	Revision	Value	Туре	
	Date			
CAD AB OEL	01 1997	3.5 mg/m3	TWA	
CAD BC	01 1997	3.5 mg/m3	TWA	
OEL				
CAD ON	09 2000	3.5 mg/m3	TWAEV	
OEL				
OEL (QUE)	12 2008	3.5 mg/m3	TWA	
CAD SK OEL	05 2009	3.5 mg/m3		
CAD SK OEL	05 2009	7 mg/m3	15 MIN ACL	
CAD MB	03 2011	3 mg/m3	TWA	
OEL				

 Caprolactam CAS-No.: 105-60-2

• Capiciaci			6/10 110.: 100 00 Z
Basis	Revision Date	Value	Туре
CAD BC OEL	12 2005	1 mg/m3	TWA
CAD BC OEL	12 2005	3 mg/m3	STEL
CAD ON OEL	04 2005	5 mg/m3	TWAEV
OEL (QUE)	12 2008	1 mg/m3	TWA
OEL (QUE)	12 2008	23 mg/m3	TWA
OEL (QUE)	12 2008	46 mg/m3	STEL
OEL (QUE)	12 2008	3 mg/m3	STEL
CAD AB OEL	07 2009	5 mg/m3	TWA
CAD SK OEL	05 2009	5 mg/m3	8 HR ACL
CAD SK OEL	05 2009	10 mg/m3	15 MIN ACL
CAD MB	03 2011	5 mg/m3	TWA
OEL			

	• 2,6-bis(1,	1-dimethylethyl)-	4-methyl-phenol		CAS-No.: 128-37-0
E	Basis	Revision	Value	Type	
		Date			
(CAD AB OEL	10 2003	10 mg/m3	TWA	
(CAD BC	08 2004	2 mg/m3	TWA	
(DEL				

REG_NOAM 8/23 ΕN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

CAS-No.: 150-76-5

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

CAD BC OEL	08 2004	2 mg/m3	TWA
OEL (QUE)	12 2008	10 mg/m3	TWA
CAD SK OEL	05 2009		8 HR ACL
CAD SK OEL	05 2009		15 MIN ACL
CAD MB	03 2011	2 mg/m3	TWA
OEL		_	
CAD ON	11 2010	2 mg/m3	TWAEV
OEL			

mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

Basis	Revision Date	Value	Туре
CAD AB OEL	01 1997	5 mg/m3	TWA
CAD BC OEL	01 1997	5 mg/m3	TWA
CAD ON OEL	09 2000	5 mg/m3	TWAEV
OEL (QUE)	12 2008	5 mg/m3	TWA
CAD SK OEL	05 2009	•	8 HR ACL
CAD SK OEL	05 2009	10 mg/m3	15 MIN ACL
CAD MB OEL	03 2011	5 mg/m3	TWA

 Cupferron 	Al			CAS-No.: 15305-07-4
Basis	Revision	Value	Туре	
	Date			
CAD BC	05 2013	1 mg/m3	TWA	
OEL		_		
CAD MB	03 2014	1 mg/m3	TWA	
OEL				
CAD ON	11 2010	1 mg/m3	TWAEV	
OEL				
CAD SK OEL	05 2009	10 mg/m3	8 HR ACL	
CAD SK OEL	05 2009		15 MIN ACL	

Biological limit values (US)

We are not aware of any national exposure limit.

Biological limit values (CA)

We are not aware of any national exposure limit.

8.1.1.2 Additional exposure limits under the conditions of use:

No other exposure limits applicable.

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

8.2 Exposure controls:

Occupational exposure controls:

> Instruction measures to prevent exposure:

Employees should wash their hands and face before eating, drinking, or using tobacco products. Keep away from foodstuffs, drinks and tobacco.

> Technical measures to prevent exposure:

Ensure adequate ventilation.

> Personal measures to prevent exposure:

Respiratory protection : Under normal conditions of use, respirator protection is not

> required. If respirators are used, institute a program in accordance with OSHA standard 29CFR1910.134 or Canada CSA Standard

Hand protection : Use chemical resistant gloves. In case of prolonged immersion or

> frequently repeated contact use gloves made of the materials: butylrubber (thickness >= 0.70 mm, breakthrough time > 480 min).(EN 374). The use of protective gloves should conform to the specifications of EC directive 89/686/EC and the resultant standard

EN374.

Additional advice: The data are based on own tests, literature data and information of glove manufacturers or derived from similar substances. Because several factors may influence these

properties (eg temperature), one should take into account the fact that the life of a chemical gloves in practice may be considerably shorter than indicated by the permeation test. The high diversity of

types of use are prescribed by the manufacturer.

Eye protection Safety goggles. EN 166.

Body Protection : Safety clothes : long sleeved clothing EN13688

Personal protective Educate and train employees in the safe use and handling of this

equipment

product. Emergency showers and eye wash stations should be

available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical properties:

9.1.1 Appearance:

State of matter Liquid Form : Liquid. Color : Black

: Sweetish smell Odor Odor threshold : No data available

9.1.2 Important health, safety and environmental information:

10/23 **REG NOAM** ΕN

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ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

pH : Not applicable

Autoignition temperature : No data available Vapour pressure : No data available Relative vapour density : No data available

Relative density : 1.041 Method: Literature.

Density : No data available
Solubility/qualitative : Immiscible with water.
Water solubility : No data available
Partition coefficient (n- : No data available

octanol/water)

Viscosity, dynamic : No data available
Viscosity, kinematic : No data available
Lower explosion limit : No data available
Upper explosion limit : No data available
Evaporation rate : No data available

Flammability (solid, gas) : Not flammable. Method: Literature.

9.2 Other information:

VOC content : 2.0 g/l

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:

Reactivity: Reactivity is not to be expected under normal conditions of

temperature and pressure.

10.2 Chemical stability:

Stability : The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions:

Hazardous reactions : The product is stable under normal conditions of storage and use.

10.4 Conditions to avoid:

Conditions to avoid : No data available

10.5 Materials to avoid:

Materials to avoid : No data available

10.6 Hazardous decomposition products:

Hazardous decomposition

products

: No specified dangerous decomposition products are known.

REG_NOAM 11/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicokinetics, metabolism and distribution:

No data available

Acute effects (toxicity tests):

➤ Acute Toxicity

• 2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,790 mg/kg	OECD Test Guideline
				401
Acute oral toxicity	LD50	rat	2,026 mg/kg	OECD Test Guideline
				401
	Based on ava	ailable data, t	he classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on ava	ailable data, t	he classification criteria	are not met.
Acute inhalation toxicity	LC50	rat	5.82 mg/l/ 4 h	OECD Test Guideline
				403

• N-vinyl caprolactam

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	ca. 1,400 mg/kg	Literature.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	Literature.
	Based on av	ailable data,	the classification criteria	are not met.
Acute inhalation toxicity	LC50	rat		
	It was demoi respirable ae		t during intended and fore ned.	seen applications, no

Isodecyl acrylate

	Effect dose	Species	Value	Method
Acute oral toxicity	LD 50	Rat	+/- 4,435 mg/kg	
Acute dermal toxicity	LD 50	Rabbit	7,522 mg/kg	
Acute inhalation toxicity	LC 50	Rat	> 1.19 mg/l/ 8 h	
-	Vapor		_	

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

Effect dose	Species	Value	Method	
=::00: 000	Op 30.33			
No data availa	ıble			
				· ·
		Effect dose Species No data available	,	•

REG_NOAM	12/23	EN
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ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Acute inhalation toxicity	No data available
Acute initialation toxicity	No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg Literature.
	Based on av	ailable data	the classification criteria are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg Literature.
	Based on av	ailable data	the classification criteria are not met.
Acute inhalation toxicity			
	No data ava	lable	

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline 401
	Danadan a	-: - - -4-	Alexandra e i finantia e e e e i fantia	
	Based on av	aliable data	, the classification criteria	are not met.
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline
				402
	Based on av	ailable data	, the classification criteria	are not met.
Acute inhalation toxicity				
	No data avai	lable		

• Oxybis(methyl-2,1-ethanediyl) diacrylate

	Effect dose	Species	Value Method
Acute oral toxicity	LD50	rat	4,600 mg/kg Literature.
	Based on av	ailable data	, the classification criteria are not met.
Acute dermal toxicity	LD 50	Rabbit	> 2,000 mg/kg
Acute inhalation toxicity	LC 0	Rat	0.41 mg/l/ 7 h
•	Vapor		-

Caprolactam

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rat	1,475 mg/kg	Directive 92/32/EEC,
				Annex V, B.1.
	Harmful by ir	halation and if	swallowed.	
Acute oral toxicity	LD50	rat	1,876 mg/kg	Directive 92/32/EEC,
				Annex V, B.1.
	Harmful by ir	halation and if	swallowed.	
Acute dermal toxicity	LD50	rabbit	1,440 mg/kg	Literature.
	Harmful in co	ontact with skin.		
Acute inhalation toxicity	LC50	rat	8.16 mg/l/ 4 h	OECD Test Guideline
				403
	Harmful by ir	nhalation.		

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect dose	Species	Value	Method
Acute oral toxicity	LD50	rabbit	6,000 mg/kg	OECD Test Guideline

REG_NOAM	13/23	EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

				401	
	Based on	available data,	the classification criteria	are not met.	
Acute dermal toxicity	LD50	rat	> 2,000 mg/kg	OECD Test Guideline	
				402	
	Based on available data, the classification criteria are not met.				
Acute inhalation toxicity					
	No data available				

• meguinol; 4-methoxyphenol; hydroguinone monomethyl ether

	Effect dose	Species	Value Method		
Acute oral toxicity	LD50	rat	1,600 mg/kg Literature.		
Acute dermal toxicity		rat	> 2,000 mg/kg OECD N° 423		
	Based on ava	ailable data	, the classification criteria are not met.		
Acute inhalation toxicity					
	No data avai	lable			

Cupferron Al

	Effect dose Species	Value Method
Acute oral toxicity		
	No data available	
Acute dermal toxicity		
	No data available	
Acute inhalation toxicity		
	No data available	

> Specific target organ toxicity (STOT):

Specific effects	Affected organs
Based on available data, the classification criteria are not met.	

> Irritant and corrosive effects:

Exposure time	Species	Evaluation	Method
Irritating to	skin.		
_			
Risk of seri	ous damage	to eyes.	
	time Irritating to	Irritating to skin.	time

> Irritation to the respiratory tract:

Based on available data, the classification criteria are not met.

> Sensitisation:

Species	Evaluation	Method
	May cause sensitization	on of susceptible persons by skin contact.

REG_NOAM	14/23	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

> Aspiration hazard:

No data available

Sub-acute, sub-chronic and chronic toxicity

> Repeated dose toxicity:

No data available

> Specific target organ toxicity (STOT):

May cause damage to organs through prolonged or repeated exposure.

> CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

- Carcinogenicity

Based on available data, the classification criteria are not met.

- Mutagenicity

Based on available data, the classification criteria are not met.

- Genetic toxicity in vitro

No data available

- Genetic toxicity in vivo

No data available

- Teratogenicity

Based on available data, the classification criteria are not met.

- Toxicity to reproduction

Based on available data, the classification criteria are not met.

> Summarised evaluation of the CMR properties:

Carcinogenicity : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Teratogenicity : Based on available data, the classification criteria are not met.

Toxicity to reproduction : Based on available data, the classification criteria are not met.

Experiences made in practice:

• 2-(2-Vinyloxyethoxy) ethyl acrylate

May be harmful by inhalation, ingestion, skin adsorption.

REG_NOAM 15/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

N-vinyl caprolactam

For industrial applications, there are no data available.

Isodecyl acrylate

No data available

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Suspected of damaging fertility or the unborn child.

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

Inhalation of aerosol or skin contact may cause sensitisation of susceptible persons.

Oxybis(methyl-2,1-ethanediyl) diacrylate

No data available

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

May cause eye irritation with susceptible persons. May cause irritation of respiratory tract.

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

No data available

Cupferron Al

No data available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

2-(2-Vinyloxyethoxy) ethyl acrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	6.8 mg/l
	Method	OECD Test	Guideline 203	
Toxicity to fish	NOEC	96 h	Brachidanio rerio (zebra fish)	2.2 mg/l
	Method	OECD Test	Guideline 203	
Toxicity to fish	LC100	96 h	Brachidanio rerio (zebra fish)	10 mg/l
•	Method	OECD Test	Guideline 203	-
Toxicity to daphnia	EC50	48 h	Daphnia magna	55 mg/l
	Method	OECD Test	Guideline 202	-
Toxicity to daphnia	EC100	48 h	Daphnia magna	100 mg/l
	Method	OECD Test	Guideline 202	-
Toxicity to daphnia	NOEC	48 h	Daphnia magna	25 mg/l
•	Method	OECD Test	Guideline 202	· ·
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	5 mg/l
			(algae)	-
	Method	OECD Test	Guideline 201	
Toxicity to algae	NOEC	72 h	scenedesmus subspicatus	0.78 mg/l
, ,			Guideline 201	J

REG_NOAM 16/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Toxicity to algae	LOEC 72	h scenedesmus subspicatus	2.7 mg/l
Toxicity to bacteria	IC50 3 h	CD Test Guideline 201 n CD-Guideline No.209; 88/302/EEC C.11	741 mg/l

N-vinyl caprolactam

	Effect	Exposure	Species	Value
	dose	time	·	
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	318 mg/l
	Method	: OECD Test	Guideline 203	
	Based of	on available c	lata, the classification criteria are not met.	
Toxicity to daphnia	EC50	48 h	Daphnia magna	> 100 mg/l
	Method	: OECD Test	Guideline 202	
	Based of	on available d	lata, the classification criteria are not met.	
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	> 100 mg/l
			(algae)	
	Method	: Literature.		
	Based of	on available c	lata, the classification criteria are not met.	
Toxicity to bacteria	EC50	16 h	Pseudomonas putida	622 mg/l
-			(bacteria)	_
	Method	: OECD-Guid	leline No.209; 88/302/EEC C.11	
	Based of	on available d	lata, the classification criteria are not met.	

Isodecyl acrylate

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Oncorhynchus mykiss	1.81 mg/l
			(rainbow trout)	
	Method	: OECD Test	Guideline 203	
Toxicity to fish	NOEC	96 h	Oncorhynchus mykiss	0.381 mg/l
			(rainbow trout)	
	Method	: OECD Test	Guideline 203	
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	1.3 mg/l
	Method	: OECD Test	Guideline 202	
Toxicity to algae	EC50	72 h	Desmodesmus subspicatus	1.71 mg/l
			(algae)	
	Method	: Literature.		
Toxicity to algae	NOEC	72 h	Desmodesmus subspicatus	0.45 mg/l
			(algae)	
	Method	: OECD Test	Guideline 201	
Toxicity to bacteria	EC50	0.5 h	Pseudomonas putida	> 10,000 mg/l
			(bacteria)	
	Method	Literature.		

• 2-Propenoic acid ,1-6-hexanediyl ester,polymer with 2-aminoethanol

	Effect dose	Exposure time	Species	Value
Toxicity to fish	No data	available		

REG_NOAM 17/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Toxicity to daphnia	
Toxicity to algae	No data available
, ,	No data available
Toxicity to bacteria	No data available

• Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	< 100.00 mg/l
•	Method:	Literature.	,,,	_
Toxicity to daphnia	EC0	48 h	Daphnia magna (water flea)	< 100.00 mg/l
	Method:	Literature.	,	J
Toxicity to daphnia	EC50	48 h	Daphnia	3.53 mg/l
	Method:	Literature.	•	· ·
Toxicity to algae	EC50	72 h	Algae	> 1,000 mg/l
,	Method:	Literature.	· ·	
Toxicity to bacteria	EC50	17 h	Bacteria	> 500.00 mg/l
•	Method:	Literature.		· ·

• phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	96 h	Brachidanio rerio (zebra fish)	> 0.09 mg/l
-	Method	: OECD Test	Guideline 203	-
Toxicity to daphnia	EC50	48 h	Daphnia magna	> 1,175 mg/l
	Method	OECD Test	Guideline 202	-
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	> 0.26 mg/l
			(algae)	-
	Method	OECD Test	Guideline 201	
Toxicity to bacteria	EC50	3 h	Bacteria	> 100 mg/l
	Method	: OECD-Guid	eline No.209; 88/302/EEC C.11	· ·

• Oxybis(methyl-2,1-ethanediyl) diacrylate

, , ,	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	NOAE	96 h	Leuciscus idus	1 mg/l
	L			
	Method:	Static		
	experim	ental result		
Toxicity to fish	LC50	96 h	Leuciscus idus (golden orfe)	2.15 to 4.64 mg/l
		Literature.		
		n available c	lata, the classification criteria are not met	
Toxicity to algae		72 h	Algae	< 16.7 mg/l
		Literature.		
	Based of	n available c	lata, the classification criteria are not met	
Toxicity to bacteria				
	No data	available		

REG_NOAM 18/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

• (Capro	lactam
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	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	48 h	Salmo gairdneri (rainbow trout)	> 500 mg/l
Toxicity to daphnia	EC50	48 h	Daphnia magna (water flea)	> 500 mg/l
Toxicity to algae	EC50	72 h	Scenedesmus subspicatus	130 mg/l
Toxicity to bacteria	EC50	17 h	(algae) Pseudomonas putida	4,200 mg/l
TOXICITY TO DACTETIA	1030	17 11	(bacteria)	4,200 mg/r

• 2,6-bis(1,1-dimethylethyl)-4-methyl-phenol

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish	LC50	48 h	Oryzias latipes (rice fish)	5.3 mg/l
	Method	: Literature.		_
Toxicity to daphnia	EC50	48 h		0.48 mg/l
	Method	: OECD Test	Guideline 202	-
Toxicity to algae	EC50	96 h	Algae	0.758 mg/l
	Method	: Literature.		· ·
Toxicity to bacteria				
,	No data	available		

• mequinol; 4-methoxyphenol; hydroquinone monomethyl ether

	Effect	Exposure	Species	Value
	dose	time		
Toxicity to fish		96 h	Pisces (fish)	28.5 mg/l
	Method	: Literature.		_
Toxicity to fish	LC50	96 h	Pimephales promelas (fathead minnow)	110 mg/l
	Method	: Literature.	,	
	Based of	on available d	lata, the classification criteria are not met.	
Toxicity to daphnia				
	No data	available		
Toxicity to algae				
	No data	available		
Toxicity to bacteria	EC50	0.5 h		4.61 mg/l
-	Method	: Literature.		

Cupferron Al

	Effect dose	Exposure time	Species	Value
Toxicity to fish				
	No data	available		
Toxicity to daphnia				
Taviait ta alama	No data	available		
Toxicity to algae	No data	available		
Toxicity to bacteria	ino dala	avaliable		

REG_NOAM	19/23	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

No data available

12.2 Persistence and degradability:

Physico-chemical removability

Chemical Oxygen Demand (COD)

No data available

Adsorbed organic bound halogens (AOX)

Product does not contain any organic halogens.

Biodegradation

No data available

Biochemical Oxygen Demand (BOD)

No data available

12.3 Bioaccumulative potential:

Partition coefficient (n-octanol/water)

No data available

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil:

No information available.

Henry's constant

Value	Temperature	Method
		No information available.

Transport between environmental compartments

No data available

12.5 Results of PBT and vPvB assessment:

This product does not meet the criteria concerning PBT or vPvB substances as described in Annex XIII of the REACH regulation (1907/2006 EC)

12.6 Other adverse effects:

REG_NOAM	20/23	EN
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According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer. Avoid infiltration in to drinking supplies, waste water or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Discharge to sewer may require approval of permitting authority and may require pretreatment.

Empty containers.

Recondition or dispose of empty container in accordance with governmental regulations.

US. RCRA Hazardous Waste Classification (40 CFR 261)

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

SECTION 14. TRANSPORT INFORMATION

Not regulated according to IMO/IMDG.

Not regulated according to ICAO/IATA aircraft only.

Not regulated according to ICAO/IATA passenger and cargo aircraft.

Not Regulated according to US Department of Transportation (DOT) 49 CFR

Not regulated according to Transport of Dangerous Goods (TDG)

SECTION 15. REGULATORY INFORMATION

US. Toxic Substances Control Act (TSCA)

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (U.S, EPA TSCA) inventory.

US. OSHA Classification

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

US. SARA 311/312 Hazard Categories

Acute (Immediate) Chronic (Delayed)

US. California Prop. 65

• Carbon Black (carbon) : Carcinogenic.

REG_NOAM 21/23 EN

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

State Right-to-Know Information

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

		<u>CAS-No.</u>	<u>Concentra</u>	<u>tion</u> [%]
•	Carbon Black (carbon)	1333-86-4	>= 1.0 -	<= 5.0
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

		<u>CAS-No.</u>	<u>Concentration</u> [%]	
•	Carbon Black (carbon)	1333-86-4	>= 1.0 - <= 5.0	
•	Caprolactam	105-60-2	>= 0.1 - <= 0.5	
•	2,6-bis(1,1-dimethylethyl)-	128-37-0	>= 0.1 - <= 0.5	
	4-methyl-phenol			

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

		<u>CAS-No.</u>	Concentration [%]	
•	Carbon Black (carbon)	1333-86-4	>= 1.0 -	<= 5.0
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5

US. Rhode Island Hazardous Substances Right-to-Know Act (R.I. Gen. Laws Section 28-21-1 et. seq.)

		<u>CAS-No.</u>	Concentration [%]	
•	Carbon Black (carbon)	1333-86-4	>= 1.0 -	<= 5.0
•	Caprolactam	105-60-2	>= 0.1 -	<= 0.5

US. Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists: See Section 2.

Canadian WHMIS Classification

E : Corrosive Material

Canadian Environmental Protection Act (CEPA)

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

modified polyacrylate

SECTION 16. OTHER INFORMATION

Text of H-phrases referred to under headings 2 and 3:

According to OSHA Hazard Communication Standard Rule - 29 CFR 1910.1200 and the Canadian Hazardous Products Act



ARIGI UV K3 BLACK INK

SUBID:000001014005

Version 1 Print Date 02-17-2017

Revision Date 09-28-2015

Н	302	Harmful if swallowed.
Н	315	Causes skin irritation.
Н	317	May cause an allergic skin reaction.
Н	318	Causes serious eye damage.
Н	319	Causes serious eye irritation.
Н	332	Harmful if inhaled.
Н	335	May cause respiratory irritation.
Н	341	Suspected of causing genetic defects (state route of exposure if it is
		conclusively proven that no other routes of exposure cause the hazard).
Н	351	Suspected of causing cancer (state route of exposure if it is conclusively proven
		that no other routes of exposure cause the hazard).
H	361f	Suspected of damaging fertility.
Н	372	Causes damage to organs (or state all organs affected, if known) through
		prolonged or repeated exposure (state route of exposure if it is conclusively
		proven that no other routes of exposure cause the hazard).
Η₄	400	Very toxic to aquatic life.
Η₄	410	Very toxic to aquatic life with long lasting effects.
H4	411	Toxic to aquatic life with long lasting effects.
Η₄	412	Harmful to aquatic life with long lasting effects.
H	413	May cause long lasting harmful effects to aquatic life.

This MSDS is replacing Agfa MSDS number 1530G

This information is furnished without warranty, expressed or implied, and is believed to be accurate to the best knowledge of Agfa Corporation. The data on this SDS relates only to the specific material designated herein. Agfa Corporation assumes no legal responsibility for use or reliance upon these data. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

REG_NOAM 23/23 EN