SAFETY DATA SHEET

Product description: KORTHO INK GJ4 BLACK, 4X 100CM3

1. IDENTIFICATION OF THE SUBSTANCE OR THE MIXTURE AND OF THE COMPANY/BUSINESS

1.1 Product identifications

Product name : Kortho Ink GJ4 black, 4x100 cm3
Internal code number : 083815
Product description : Printing ink

1.2 Relevant identified use of the substance or the mixture and use that is advised against

Main use category : Professional use
Industrial/ Professional use spec : Industrial. For professional use only.
Identified use : Ink for use in inkjet printing system to apply codes and marked to primary and secondary packaging. Not intended for incidental food contact. Use only where an approved food barrier present.
Uses advised against : Not for use as direct or indirect food contact.

1.3 Details relating to the provider of the safety data sheet

Company : B.V. Korthofah
Lageweg 39
2222AG Katwijk ZH
The Netherlands
Telephone : 0031 71 40 60 480
E-mail address : export@kortho.nl

1.4 Telephone number in case of emergencies

Emergency telephone number : 111
Organisation/company : National Poisons Information Service (NHS Direct) – http://wwww.npis.org
(England, Wales and Northern Ireland - NHS 111 and Scotland - NHS 24)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or the mixture

Product definition : mixture

Classification in accordance with directive (EC) No. 1272/2008

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Repr. 1B	H360
STOT SE 3	H335
Aquatic Chronic 3	H412

For the full text on H statements as set out in this section, see section 16.

Adverse physicochemical, human health and environmental effects
No additional information available.

2.2 Labelling elements

According to Regulation (EC) No 1272/2008 [CLP]

Hazard Pictogram :

Signal Word : Danger
Hazardous ingredients : N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone
Hazard Statement(s)

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H360	May damage fertility or the unborn child
H412	Harmful to aquatic life with long lasting effects

Precautionary statements

P201	Obtain special instructions before use
P261	Avoid breathing fume, vapours
P264	Wash all exposed external body areas thoroughly after handling
P271	Use only outdoors or in a well- ventilated area
P273	Avoid release to the environment
P280	Wear eye protection, face protection, protective clothing, protective gloves

2.3 Other hazards

No additional information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Component	Identifiers	Cont.%	Classification Regulation (EC) No 1272/2008 [CLP]
Polyvinylpyrrolidone	CAS: 9003-39-8 EC: 201-800-4	0-10%	Not classified
N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone substance listed as REACH Candidate (1-Methyl-2-pyrrolidone)	CAS: 872-50-4 EC: 212-828-1 EC index: 606-021-00-7 REACH: 01-2119472430-46-XXXX	0-10%	Skin Irrit,. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360D STOT SE 3, H335
Glycerol	CAS: 56-81-5 EC: 200-289-5	0-5%	Not classified
Sodium bis[1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)]chromate(1-)	CAS: 57206-81-2 EC: 260-616-2	0-5%	Eye Irrit. 2A, H319 Aquatic Chronic 3, H412
Sodium bis[1-[[2-hydroxy-3-nitro-5-tert-pentylphenyl]azo]-2-naphtholato(2-)]chromate(1-)	CAS: 57206-83-4 EC: 260-617-8	0-5%	Aquatic Chronic 2, H411
Sodium bis[1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)]chromate(1-)	CAS: 64611-73-0 EC: 264-966-7	0-5%	Eye Irrit. 2A, H319 Aquatic Chronic 3, H412
Sodium [1-[(2-hydroxy-4-nitrophenyl)azo]-2-naphtholato(2-)][1-[(2-hydroxy-5-nitrophenyl)azo]-2-naphtholato(2-)]chromate(1-)	CAS: 59307-49-2 EC: 261-691-4	0-5%	Eye Irrit. 2A, H319 Aquatic Chronic 3, H412

Component	Identifiers	Specific concentration limits
N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone	CAS: 872-50-4 EC: 212-828-1 EC index: 606-021-00-7 REACH: 01-2119472430-46-XXXX	(C >= 5) Repr. 1B, H360D (C >= 10) STOT SE 3, H335

See section 16 for the full text of the H statements declared above.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice : Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention.

In case of inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell. Allow victim to breathe fresh air. Allow the victim to rest.

In case of skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

In case of eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

In case of ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May damage fertility or the unborn child.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

5. FIRE FIGHTING MEASURES

5.1 Fire extinguishers

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture

No additional information available.

5.3 Advice for fire-fighters

Fire-fighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during fire-fighting : Do not enter fire area without proper protective equipment, including respiratory protection.

6. MEASURES IN THE EVENT OF THE ACCIDENTAL RELEASE OF THE SUBSTANCE OR PREPARATION

6.1 Personal precautions, protective equipment and emergency procedures

For non emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

For emergency responders

Protective equipment : Equip clean-up crew with proper protection.

Emergency procedures : Ventilate area.

6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3 Containment and cleaning methods and materials

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4 Reference to other sections

See section 8. Exposure controls and personal protection.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling of the substance or mixture

Precautions for safe handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Provide good ventilation in process area to prevent formation of vapour.
Do not handle until all safety precautions have been read and understood.
Obtain special instructions before use.
Use only outdoors or in a well-ventilated area.
Avoid breathing fume, vapours.

Hygiene measures

Wash Skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep container closed when not in use. Keep only in the original container in a cool, well ventilated place away from: Direct sunlight, Heat-ignition.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3 Specific end use(s)

No additional information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Polyvinylpyrrolidone (9003-39-8)

Belgium	Limit value (mg/m³)	3 mg/m³
France	VME (mg/m³)	Poussières réputées sans effet spécifique, 10 mg/m³; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante; Poussières réputées sans effet spécifique, fraction; 5 mg/m³; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m³
United Kingdom	WEL TWA (mg/m³)	4 mg/m³

Glycerol (56-81-5)

Belgium	Limit value (mg/m³)	10 mg/m³
France	VME (mg/m³)	Glycérine (aérosols de),10 mg/m³; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative
Greece	OEL TWA (mg/m³)	10 mg/m³
Italy - Portugal - USA ACGIH	Remark (ACGIH)	URT irr
Switzerland	VLE (mg/m³)	100 mg/m³

Switzerland	VME (mg/m³)	50 mg/m³
Switzerland	Remark (CH)	4x15
United Kingdom	WEL TWA (mg/m³)	10 mg/m³
Czech Republic	Expoziční limity (PEL) (mg/m³)	10 mg/m³
Czech Republic	Expoziční limity (PEL) (ppm)	2,4 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m³)	15 mg/m³
Czech Republic	Expoziční limity (NPK-P) (ppm)	3,7 ppm
Finland	HTP-arvo (8h) (mg/m³)	20 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³
Poland	NDS (mg/m³)	10 mg/m³
Australia	TWA (mg/m³)	10 mg/m³
Australia	Remark (AU)	(a)
Portugal	OEL TWA (mg/m³)	10 mg/m³

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

EU	IOELV TWA (mg/m³)	40 mg/m³

Polyvinylpyrrolidone (9003-39-8)

EU	IOELV TWA (ppm)	10 ppm
EU	IOELV STEL (mg/m³)	80 mg/m³
EU	IOELV STEL (ppm)	20 ppm
EU	Notes	skin
Austria	MAK (mg/m³)	40 mg/m³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (mg/m³)	80 mg/m³
Austria	MAK Short time value (ppm)	20 ppm
Austria	Remark (AT)	H,Sh
Belgium	Limit value (mg/m³)	40 mg/m³
Belgium	Limit value (ppm)	10 ppm
Belgium	Short time value (mg/m³)	80 mg/m³
Belgium	Short time value (ppm)	20 ppm
Belgium	Remark (BE)	D
France	VLE (mg/m³)	N-méthyl-2-pyrrolidone,80 mg/m³; France; Short time value; VRI: Valeur réglementaire indicative
France	VLE (ppm)	N-méthyl-2-pyrrolidone,20 ppm; France; Short time value; VRI: Valeur réglementaire indicative
France	VME (mg/m³)	N-méthyl-2-pyrrolidone,40 mg/m³; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative
France	VME (ppm)	N-méthyl-2-pyrrolidone,10 ppm; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	82 mg/m³
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm
Germany	Remark (TRGS 900)	EU,DFG,AGS,H,Y,19
Greece	OEL TWA (mg/m³)	400 mg/m³
Greece	OEL TWA (ppm)	100 ppm
Switzerland	VLE (mg/m³)	160 mg/m³
Switzerland	VLE (ppm)	40 ppm
Switzerland	VME (mg/m³)	80 mg/m³
Switzerland	VME (ppm)	20 ppm
Switzerland	Remark (CH)	4x15
Netherlands	Grenswaarde TGG 8H (mg/m³)	40 mg/m³
Netherlands	Grenswaarde TGG 8H (ppm)	N-Methyl-2-pyrrolidon,9.72 ppm; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	80 mg/m³
Netherlands	Grenswaarde TGG 15MIN (ppm)	N-Methyl-2-pyrrolidon,19.44 ppm; Netherlands; Short time value; Public occupational exposure limit value
Netherlands	Remark (MAC)	H
Denmark	Grænseværdie (langvarig) (mg/m³)	20 mg/m³

Denmark	Grænseværdie (langvarig) (ppm)	5 ppm
Finland	HTP-arvo (8h) (mg/m³)	40 mg/m³
Finland	HTP-arvo (8h) (ppm)	10 ppm
Finland	HTP-arvo (15 min)	80 mg/m³
Finland	HTP-arvo (15 min) (ppm)	20 ppm
Hungary	AK-érték	40 mg/m³
Hungary	CK-érték	80 mg/m³
Hungary	Megjegyzések (HU)	b; EU4
Ireland	OEL (8 hours ref) (mg/m³)	40 mg/m³
Ireland	OEL (8 hours ref) (ppm)	10 ppm
Ireland	OEL (15 min ref) (ppm)	20 ppm
Ireland	Notes (IE)	Sk, IOELV
Lithuania	IPRV (mg/m³)	40 mg/m³
Lithuania	IPRV (ppm)	10 ppm
Lithuania	TPRV (mg/m³)	80 mg/m³
Lithuania	TPRV (ppm)	20 ppm
Lithuania	Remark (LT)	RO
Norway	Gjennomsnittsverdier (AN) (mg/m³)	20 mg/m³
Norway	Gjennomsnittsverdier (AN) (ppm)	5 ppm
Norway	Merknader (NO)	H R
Poland	NDS (mg/m³)	40 mg/m³
Poland	NDSCh (mg/m³)	80 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	200 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	300 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	75 ppm
Australia	TWA (mg/m³)	103 mg/m³
Australia	TWA (ppm)	25 ppm
Australia	STEL (mg/m³)	309 mg/m³
Australia	STEL (ppm)	75 ppm

8.2 Measures to control exposure

Appropriate engineering controls : Provide adequate general and local exhaust ventilation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Do not eat, drink or smoke during use.

Eye/face protection : Face protection and safety goggles. Use face and/or eye protection tested and approved by official organisations such as NIOSH (US) or EN166 (EU).

Skin protection

Gloves : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Impenetrable clothing, flame-retardant, anti-static protective clothing. The type of protective features depends on the concentration and quantity of hazardous substances in the workplace in question.

Material: Kleenguard
Type: T7 LAB (jacket) – T6 5ultra (suit)
Characteristics: EN1149-1 antistatic, non-heat retaining, protective clothing to prevent incendiary discharge. Clothing with a limited service life, which provides protection against chemicals and protects certain parts of the body:
- immediately throw clothing away after use;
- immediately throw damaged clothing away;

- strictly observe the operating instructions, which is supplied with the clothing.

Should unexpected contamination of the clothing worn under the protective clothing occur, then it should immediately be taken off and thrown away.

Respiratory protection : Whenever there are breathing risks, where necessary use a full-face respirator combined with (US) and/or type ABEK (EN 14387) breathing pattern as a support when undertaking a factory inspection. If the face mask is the only means of protection, use a full-face respirator (oxygen mask). Use respirators tested and approved by official government bodies such as NIOSH (US) or CEN (EU).

Other information : Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information about physical and chemical basic properties

Physical state	: Liquid.
Colour	: Black.
Odour	: Mild. Distinctive.
Odour threshold	: No data available.
Melting point	: No data available.
Freezing point	: No data available.
Boiling point	: 210 - 215 °C.
Flash point	: > 93 ˚C.
pH	: No data available.
Relative evaporation rate (butylacetate = 1)	: No data available.
Vapour pressure	: No data available.
Relative density	: No data available.
Density	: 1,05 - 1,15 g/cm^3.
Relative vapour density at 20˚C	: No data available.
Solubility(ies)	: No data available.
Log Pow	: No data available.
Log Kow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2 Other safety information

VOC content : 90-93%.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No additional information available.

10.2 Chemical stability

Not established.

10.3 Potential hazardous reactions

Not established.

10.4 Conditions to be avoided

Direct sunlight. Extremely high or low temperatures.

10.5 Incompatible materials

Strong acids, Strong bases.

10.6 Hazardous decomposition products
Fume. Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information about toxicological effects

Acute toxicity : Not classified.

Polyvinylpyrrolidone (9003-39-8)

LD50 oral rat	100000 mg/kg (Rat)
LD50 dermal rat	> 12000 mg/kg (Rat)
ATE CLP (oral)	100000,000 mg/kg bodyweight

Glycerol (56-81-5)

LD50 oral rat	27200 mg/kg (Rat; Experimental value)
LC50 inhalation rat (mg/l)	> 2,75 mg/l/4h (Rat; Experimental value)
ATE CLP (oral)	27200,000 mg/kg bodyweight

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

LD50 oral rat	3914 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 4150 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	7000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	8000 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >5000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 5,1 mg/l/4h (Rat; Experimental value)
ATE CLP (oral)	3914,000 mg/kg bodyweight
ATE CLP (dermal)	7000,000 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified. Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Not classified. Based on available data, the classification criteria are not met.
Carcinogenicity	: Not classified. Based on available data, the classification criteria are not met.
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: Not classified. Based on available data, the classification criteria are not met.
Aspiration hazard	: Not classified. Based on available data, the classification criteria are not met.
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecology – water : Harmful to aquatic life with long lasting effects.

Polyvinylpyrrolidone (9003-39-8)

LC50 fishes 1	> 10000 mg/l (96 h; Leuciscus idus) glycerol (56-81-5)
LC50 fishes 1	54000 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
EC50 Daphnia 1	> 10000 mg/l (24 h; Daphnia magna; Locomotor effect)
LC50 fish 2	> 1000 mg/l (96 h; Pisces)
TLM fish 1	> 1000 ppm (96 h; Pisces)
TLM other aquatic organisms 1	> 1000 ppm (96 h)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit algae 1	> 10000 mg/l (8 days; Scenedesmus quadricauda; Turbid water)
Threshold limit algae 2	2900 mg/l (192 h; Microcystis aeruginosa; Toxicity test)

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

LC50 fishes 1	3048 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Cool water)
EC50 Daphnia 1	4897 mg/l (48 h; Daphnia magna)
LC50 fish 2	832 mg/l (96 h; Lepomis macrochirus; Warm water)
EC50 Daphnia 2	4655 mg/l (Gammarus sp.)
Threshold limit algae 1	> 500 mg/l (Scenedesmus subspicatus)
Threshold limit algae 2	600,5 mg/l (72 h; Desmodesmus subspicatus; Growth rate)

12.2 Persistence and degradability

Ink GJ4

Persistence and degradability : Not established.

Polyvinylpyrrolidone (9003-39-8)

Persistence and degradability : Not readily biodegradable in water.

Glycerol (56-81-5)

Persistence and degradability	: Readily biodegradable in water.
Biochemical oxygen demand (BOD)	: 0,87 g O_2/g substance
Chemical oxygen demand (COD)	: 1,16 g O_2/g substance
ThOD	: 1,217 g O_2/g substance
BOD (% of ThOD)	: 0,71 % ThOD

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

Persistence and degradability	: Readily biodegradable in water. Inherently biodegradable. Biodegradable in soil. Photodegradation in the air.
Biochemical oxygen demand (BOD)	: 1,07 g O_2/g substance
Chemical oxygen demand (COD)	: 1,56 g O_2/g substance
ThOD	: 1,9 g O_2/g substance
BOD (% of ThOD)	: 0,56 % ThOD

12.3 Bioaccumulation

Ink GJ4

Bioaccumulative potential : Not established.

Polyvinylpyrrolidone (9003-39-8)

Bioaccumulative potential : No data available.

Glycerol (56-81-5)

Log Pow	: -1,75 (Experimental value; Equivalent or similar to OECD 107)
Bioaccumulative potential	: Not applicable.

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

Log Pow	: -0,73 - -0,46 (Experimental value)
Bioaccumulative potential	: Not bioaccumulative.

12.4 Mobility in soil

Glycerol (56-81-5)

Surface tension : 0,0634 N/m (20 °C; 1000 g/l)

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

Surface tension : 0,407 N/m

12.5 Results of PBT and vPvB assessment

N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone (872-50-4)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6 Other adverse effects

Other information : Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment Methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to a licensed waste centre in accordance with local/regional/national/international regulations.

Ecology – waste materials : Avoid release to the environment.

European List of Waste (LoW) code : 20 01 27* - paint, inks, adhesives and resins containing dangerous substances

14. INFORMATION RELATING TO TRANSPORTATION

In accordance with ADR / RID / IMDG / IATA / AND.

14.1 UN number
Not dangerous goods in terms of transport regulations.

14.2 UN proper shipping name
Not applicable.

14.3 Transport hazard class(es)
Not applicable.

14.4 Packing group
Not applicable.

14.5 Environmental hazards

Other information : No supplementary information available.

14.6 Special precautions for user

Overland transport : No additional information available.
Transport by sea : No additional information available.
Air transport : No additional information available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. REGULATIONS

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008.	Ink GJ4

3.c. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1.	Sodium bis[1-[[2-hydroxy-3-nitro-5-tert-pentylphenyl] azo]-2-naphtholato(2-)] chromate(1-)
30. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Toxic to Reproduction category 1A or 1B (Table 3.1) or Toxic to Reproduction category 1 or 2 (Table 3.2) and listed as follows: Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5 Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6	N-methyl-2-pyrrolidone, 1-methyl-2-pyrrolidone

Contains substance on the REACH candidate list in concentration ≥ 0.1% or with a lower specific limit: 1-Methyl-2-pyrrolidone (EC 212-828-1, CAS 872-50-4)

Contains no REACH Annex XIV substances

VOC content : 90 - 93 %

National regulations
Water hazard class (WGK) : 3 - severe hazard to waters

WGK remark : Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

Regional legislation : Not listed on the United States TSCA (Toxic Substances Control Act) inventory.

15.2 Chemical safety assessment
No chemical safety assessment has been carried out.

16. OTHER INFORMATION

Data sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

None.

Full text of H statements to which reference is made in sections 2 and 3

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] to which reference is made in sections 2 and 3

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2.
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3.
Eye Irrit. 2	Serious eye damage/eye irritation Category 2.
Repr. 1B	Reproductive toxicity Category 1B.
Skin Irrit. 2	Skin corrosion/irritation Category 2.
STOT SE 3	Specific target organ toxicity (single exposure) Category 3, Respiratory tract irritation.

List of abbreviations and acronyms

ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE	Acute Toxicity Estimate.
BOD	Biochemical oxygen demand.

CAS	Chemical Abstracts Service (division of the American Chemical Society).
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008].
COD	Chemical oxygen demand.
DNEL	Derived No Effect Level.
EINECS	European Inventory of Existing Commercial Chemical Substances.
EUH Statement	CLP-specific Hazard statement.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
IATA	International Air Transport Association.
IMDG	International Maritime Dangerous Goods code: International code for the transportation of hazardous substances at sea.
NVIC	Nationaal Vergiftigingen Informatie Centrum [National Poisons Information Centre].
PBT	Persistent, bioaccumulating and toxic.
PNEC	Predicted No Effect Concentration.
REACH	Registration, Evaluation and Authorisation of Chemicals.
RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations for the transportation of hazardous substances by train).
RRN	REACH Registration Number.
STOT SE	Specific target organ toxicity – single exposure.
ThOD	Theoretical oxygen demand.
vPvB	Very Persistent and very Bioaccumulative.
VwVws	Verwaltungsvorschrift wassergefährdender Stoffe.
WGK	Wassergefährdungsklassen (Water hazard class).

Revision

This SDS replaced the previous release with version number 106122012. The SDS has been converted to the current regulations.

More detailed information

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions.

It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

While the information is believed to be reliable, we do not guarantee its accuracy. Purchasers are encouraged to make their own tests with materials described herein and must make independent determination of suitability and completeness of information from all sources to assure proper use with materials and compatibility with equipment.

The above information is assumed to be correct but does not make any claim of completeness and should only be used as a guideline. Korthofah BV is not liable for any eventual damage arising out of the handling of or contact with the aforementioned product.