

Product description: KORTHO CLEANER GJ4, 200CM3

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

1.1 Product identifications

Product name : Kortho cleaner GJ4, 200 cm3
Internal code number : 083481
Product description : Printing ink flush/cleaner

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 : Printing ink flush/cleaner
Uses advised against : No additional information available.

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://www.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

Flam. Liq. 3 H226
Eye Irrit. 2 H319
STOT SE 3 H335
STOT SE 3 H336

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

: Warning

Hazardous ingredients

: 1- methoxy-2-propanol, 4-hydroxy-4-methyl-2-pentanone

Hazard Statement(s)

H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 Keep container tightly closed.

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P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical, lighting, ventilating equipment.
 P261 Avoid breathing fume, vapours.
 P264 Wash hands thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area

2.3 Other hazards
No additional information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

<u>Component</u>	<u>Identifiers</u>	<u>Cont. %</u>	<u>Classification Regulation (EC) No 1272/2008 [CLP]</u>
1-methoxy-2-propanol,	EG 203-539-1 CAS 107-98-2 EU-Idex no.603-064-00-3	40-70	Flam. Liq. 3, H226 STOT SE 3, H336
4-hydroxy-4-methyl-2-pentanone	EG 204-626-7 CAS 123-42-2 EU-Idex no. 603-016-00-1	30-50	Flam. Liq. 3, H226 Eye Irrit. 2, H319 STOT SE 3, H335

<u>Component</u>	<u>Identifiers</u>	<u>Specific concentration limits</u>
4-hydroxy-4-methyl-2-pentanone	EG 204-626-7 CAS 123-42-2 EU-Idex no. 603-016-00-1	(C>=10) Eye Irrit. 2, H319

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 you feel unwell, seek medical advice (show the label where possible).
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.
In case of skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 after inhalation : May cause respiratory irritation. May cause drowsiness or dizziness.
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.

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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

Fire hazard : Flammable liquid and vapour.
Explosion hazard : May form flammable/explosive vapour-air mixture.

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

General : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

For non emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

For emergency responders

Protective equipment : Equip clean-up crew with proper protection. Avoid breathing fume, vapours.
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

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

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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. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. 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

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof Flame proof, lighting, electrical equipment and ventilation equipment.

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. Heat sources.

7.3 Specific end use(s)

No additional information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

1-methoxy-2-propanol (107-98-2)

EU	IOELV TWA (mg/m ³)	375 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	568 mg/m ³
EU	IOELV STEL (ppm)	150 ppm
EU	Notes	Skin
Austria	MAK (mg/m ³)	187 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	187 mg/m ³
Austria	MAK Short time value (ppm)	50 ppm
Austria	Remark (AT)	H
Belgium	Limit value (mg/m ³)	375 mg/m ³
Belgium	Limit value (ppm)	100 ppm
Belgium	Short time value (mg/m ³)	568 mg/m ³
Belgium	Short time value (ppm)	150 ppm
Belgium	Remark (BE)	D
Bulgaria	OEL TWA (mg/m ³)	375 mg/m ³
Bulgaria	OEL STEL (mg/m ³)	568 mg/m ³
France	VLE (mg/m ³)	375 mg/m ³
France	VLE (ppm)	100 ppm
France	VME (mg/m ³)	188 mg/m ³
France	VME (ppm)	50 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	370 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm
Germany	Remark (TRGS 900)	DFG,EU,Y
Greece	OEL TWA (mg/m ³)	360 mg/m ³
Greece	OEL TWA (ppm)	100 ppm
Greece	OEL STEL (mg/m ³)	1080 mg/m ³
Greece	OEL STEL (ppm)	300 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	100 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	Eye irr; CNS impair; A4
Italy	OEL TWA (mg/m ³)	375 mg/m ³
Italy	OEL TWA (ppm)	100 ppm
Italy	OEL STEL (mg/m ³)	568 mg/m ³
Italy	OEL STEL (ppm)	150 ppm
Spain	VLA-ED (mg/m ³)	375 mg/m ³
Spain	VLA-ED (ppm)	100 ppm

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Spain	VLA-EC (mg/m ³)	568 mg/m ³
Spain	VLA-EC (ppm)	150 ppm
Spain	Notes	vía dérmica, VLI
Switzerland	VLE (mg/m ³)	720 mg/m ³
Switzerland	VLE (ppm)	200 ppm
Switzerland	VME (mg/m ³)	360 mg/m ³
Switzerland	VME (ppm)	100 ppm
Switzerland	Remark (CH)	4x15
Netherlands	Grenswaarde TGG 8H (mg/m ³)	375 mg/m ³
Netherlands	Grenswaarde TGG 8H (ppm)	1-Methoxy-2-propanol,100 ppm; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	563 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (ppm)	1-Methoxy-2-propanol,150 ppm; Netherlands; Short time value; Public occupational exposure limit value
Netherlands	Remark (MAC)	H
United Kingdom	WEL TWA (mg/m ³)	375 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	560 mg/m ³
United Kingdom	WEL STEL (ppm)	150 ppm
United Kingdom	Remark (WEL)	Sk
Czech Republic	Expoziční limity (PEL) (mg/m ³)	270 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	73,2 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	550 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	149,1 ppm
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (langvarig) (mg/m ³)	185 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	50 ppm
Denmark	Anmærkninger (DK)	E
Finland	HTP-arvo (8h) (mg/m ³)	370 mg/m ³
Finland	HTP-arvo (8h) (ppm)	100 ppm
Finland	HTP-arvo (15 min)	560 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	150 ppm
Hungary	AK-érték	375 mg/m ³
Hungary	CK-érték	568 mg/m ³
Hungary	Megjegyzések (HU)	b; EU1
Ireland	OEL (8 hours ref) (mg/m ³)	375 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	100 ppm
Ireland	OEL (15 min ref) (mg/m ³)	568 mg/m ³
Ireland	OEL (15 min ref) (ppm)	150 ppm
Ireland	Notes (IE)	IOELV
Lithuania	IPRV (mg/m ³)	190 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	300 mg/m ³
Lithuania	TPRV (ppm)	75 ppm
Malta	OEL TWA (mg/m ³)	375 mg/m ³
Malta	OEL TWA (ppm)	100 ppm
Malta	OEL STEL (mg/m ³)	568 mg/m ³
Malta	OEL STEL (ppm)	150 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	180 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	50 ppm
Norway	Merknader (NO)	H
Poland	NDS (mg/m ³)	180 mg/m ³
Poland	NDSch (mg/m ³)	360 mg/m ³
Romania	OEL TWA (mg/m ³)	375 mg/m ³
Romania	OEL TWA (ppm)	100 ppm
Romania	OEL STEL (mg/m ³)	568 mg/m ³
Romania	OEL STEL (ppm)	150 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	190 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	300 mg/m ³

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Sweden	kortidsvärde (KTV) (ppm)	75 ppm
Australia	TWA (mg/m ³)	369 mg/m ³
Australia	TWA (ppm)	100 ppm
Australia	STEL (mg/m ³)	553 mg/m ³
Australia	STEL (ppm)	150 ppm
Portugal	OEL TWA (ppm)	100 ppm
Portugal	OEL STEL (ppm)	150 ppm

4-hydroxy-4-methyl-2-pentanone (123-42-2)

Austria	MAK (mg/m ³)	240 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	Remark (AT)	H
Belgium	Limit value (mg/m ³)	241 mg/m ³
Belgium	Limit value (ppm)	50 ppm
France	VME (mg/m ³)	240 mg/m ³
France	VME (ppm)	50 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	96 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm
Germany	Remark (TRGS 900)	DFG,H
Greece	OEL TWA (mg/m ³)	240 mg/m ³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m ³)	360 mg/m ³
Greece	OEL STEL (ppm)	75 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm
Italy - Portugal - USA ACGIH	Remark (ACGIH)	URT & eye irr
USA OSHA	OSHA PEL (TWA) (mg/m ³)	240 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
Switzerland	VLE (mg/m ³)	192 mg/m ³
Switzerland	VLE (ppm)	40 ppm
Switzerland	VME (mg/m ³)	96 mg/m ³
Switzerland	VME (ppm)	20 ppm
Switzerland	Remark (CH)	4x15
United Kingdom	WEL TWA (mg/m ³)	241 mg/m ³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m ³)	362 mg/m ³
United Kingdom	WEL STEL (ppm)	75 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	200 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	40 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	300 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	60 ppm
Denmark	Grænseværdie (langvarig) (mg/m ³)	240 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	50 ppm
Finland	HTP-arvo (8h) (mg/m ³)	240 mg/m ³
Finland	HTP-arvo (8h) (ppm)	50 ppm
Finland	HTP-arvo (15 min)	360 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	75 ppm
Ireland	OEL (8 hours ref) (mg/m ³)	240 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m ³)	360 mg/m ³
Ireland	OEL (15 min ref) (ppm)	75 ppm
Lithuania	IPRV (mg/m ³)	120 mg/m ³
Lithuania	IPRV (ppm)	25 ppm

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1-methoxy-2-propanol (107-98-2)

Lithuania	TPRV (mg/m ³)	240 mg/m ³
Lithuania	TPRV (ppm)	50 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	120 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	5 ppm
Poland	NDS (mg/m ³)	240 mg/m ³
Romania	OEL TWA (mg/m ³)	150 mg/m ³
Romania	OEL TWA (ppm)	32 ppm
Romania	OEL STEL (mg/m ³)	250 mg/m ³
Romania	OEL STEL (ppm)	53 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	120 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	25 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	240 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	50 ppm
Australia	TWA (mg/m ³)	238 mg/m ³
Australia	TWA (ppm)	50 ppm
Portugal	OEL TWA (ppm)	50 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

Hand protection

: Handle with gloves. Properly check gloves before use. Carefully remove gloves without touching the outside with your exposed hand. Immediately throw away used gloves in accordance with the valid laboratory regulations. Wash and dry your hands. The protective gloves must comply with the specifications of EU Directive 89/686/EEC and the standard EN 374, which has been derived from this. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers.

Glove material: Nitrile*
Thickness of material: 0.4 ± 0.05mm
Penetration time: 120 minutes

(* Tested glove Nitrile I – KCL 0730)

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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information about physical and chemical basic properties

Physical state	: Liquid.
Colour	: Clear, amber.
Odour	: Mild.
Odour threshold	: No data available.
Melting point	: No data available.
Freezing point	: No data available.
Boiling point	: 118 - 166 °C.
Flash point	: 34 °C.
pH	: No data available.
Relative evaporation rate (butylacetate = 1)	: No data available.
Vapour pressure	: No data available.
Relative density	: No data available.
Density	: No data available.
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)	: Flammable liquid and vapour.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2 Other safety information

No additional information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No additional information available.

10.2 Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3 Potential hazardous reactions

Not established.

10.4 Conditions to be avoided

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparsk

10.5 Incompatible materials

Strong acids. Strong bases.

10.6 Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

11. TOXICOLOGICAL INFORMATION

11.1 Information about toxicological effects

Acute toxicity : Not classified.
Based on available data, the classification criteria are not met.

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1-methoxy-2-propanol (107-98-2)

LD50 oral rat	6600 mg/kg (Rat; Other; Literature study; 4016 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; Experimental value; Other)
LD50 dermal rabbit	13000 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	55 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	15000 ppm/4h (Rat; Literature study)
ATE CLP (oral)	6600,000 mg/kg bodyweight
ATE CLP (dermal)	13000,000 mg/kg bodyweight
ATE CLP (gases)	15000,000 ppmv/4h
ATE CLP (vapours)	55,000 mg/l/4h
ATE CLP (dust,mist)	55,000 mg/l/4h

4-hydroxy-4-methyl-2-pentanone (123-42-2)

LD50 oral rat	2520 mg/kg (3002 mg/kg bodyweight; Rat; Rat; Experimental value,3002 mg/kg bodyweight; Rat; Rat; Experimental value)
LD50 dermal rat	> 1875 mg/kg bodyweight (Rat; Experimental value,Rat; Experimental value)
LD50 dermal rabbit	13500 mg/kg (Rabbit)
ATE CLP (oral)	2520,000 mg/kg bodyweight
ATE CLP (dermal)	13500,000 mg/kg bodyweight

Skin corrosion/irritation	: Not classified. Based on available data, the classification criteria are not met.
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. May cause drowsiness or dizziness.
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

1-methoxy-2-propanol (107-98-2)

LC50 fishes 1	4600 - 10000 mg/l (96 h; Leuciscus idus; Nominal concentration)
EC50 Daphnia 1	23300 mg/l (48 h; Daphnia magna; Nominal concentration)
LC50 fish 2	20800 mg/l (96 h; Pimephales promelas)
Threshold limit algae 1	> 1000 mg/l (168 h; Pseudokirchneriella subcapitata; Growth rate)

4-hydroxy-4-methyl-2-pentanone (123-42-2)

LC50 fishes 1	8930 mg/l (48 h; Leuciscus idus)
LC50 other aquatic organisms 1	100 - 1000 mg/l (96 h)
EC50 Daphnia 1	9000 mg/l (24 h; Daphnia magna; Static system)
LC50 fish 2	420 mg/l (96 h; Lepomis macrochirus)
Threshold limit other aquatic organisms 1	100 - 1000,96 h; Protozoa
Threshold limit other aquatic organisms 2	1400 mg/l (72 h)
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)
Threshold limit algae 2	3000 mg/l (168 h; Scenedesmus quadricauda)

12.2 Persistence and degradability

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Persistence and degradability	Not established.
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1-methoxy-2-propanol (107-98-2)

Persistence and degradability Readily biodegradable in water. Biodegradable in soil. No (test) data available on mobility of the substance.
ThOD 1,95 g O₂/g substance

4-hydroxy-4-methyl-2-pentanone (123-42-2)

Persistence and degradability Readily biodegradable in water. Biodegradable in soil.
Biochemical oxygen demand (BOD) 0,07 g O₂/g substance
Chemical oxygen demand (COD) 2,11 g O₂/g substance
ThOD 2,21 g O₂/g substance
BOD (% of ThOD) 0,03 % ThOD

12.3 Bioaccumulation

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Bioaccumulative potential Not established.

1-methoxy-2-propanol (107-98-2)

BCF fish 1 1 (Pimephales promelas)
Bioaccumulative potential Low bioaccumulation potential (Log Kow < 4).

4-hydroxy-4-methyl-2-pentanone (123-42-2)

Log Pow -0,14 - 1,03 (Calculated)
Bioaccumulative potential Low bioaccumulation potential (Log Kow < 4).

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

No additional information available.

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.

Additional information

: Handle empty containers with care because residual vapours are flammable.

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

UN-No. (ADR) : 1210

Product description: KORTHO CLEANER GJ4, 200CM3

14.2 UN proper shipping name

Proper Shipping Name (ADR) : PRINTING INK RELATED MATERIAL
Transport document description (ADR) : UN 1210 PRINTING INK RELATED MATERIAL (CONTAINS ; 1-methoxy-2-propanol(107-98-2) ; 4-hydroxy-4-methyl-2-pentanone(123-42-2)), 3, III, (D/E)

14.3 Transport hazard class(es)

Class (ADR) : 3

Danger labels (ADR) : 3



14.4 Packing group

Packaging group (ADR) : III

14.5 Environmental hazards

Other information : No supplementary information available.

14.6 Special precautions for user

Overland transport : No additional information available.

Hazard identification number (Kemler No.) : 30
Classification code (ADR) : F1

Orange plates :

30
1210

Special provisions (ADR) : 163, 640E
Transport category (ADR) : 3
Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 5l
Excepted quantities (ADR) : E1
EAC code : •3YE

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. Cleaner GJ4

40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. Cleaner GJ4

Product description: KORTHO CLEANER GJ4, 200CM3

Contains no substance on the REACH candidate list.

Contains no REACH Annex XIV substances.

National regulations

Water hazard class (WGK) : 1 – low 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).
Storage class : LGK 3 – Flammable liquids.
VbF class : A II – Liquids with a flashpoint between 21 °C and 55 °C.

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

H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

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

Eye Irrit. 2 Serious eye damage/eye irritation, Category 2.
Flam. Liq. 3 Flammable liquids, Category 3.
STOT SE 3 Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation.
STOT SE 3 Specific target organ toxicity — Single exposure, Category 3, Narcosis.

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.
VbF Verordnung über brennbare Flüssigkeiten.

Product description: KORTHO CLEANER GJ4, 200CM3

vPvB	Very Persistent and very Bioaccumulative.
VwVws	Verwaltungsvorschrift wassergefährdender Stoffe.
WGK	Wassergefährdungsklassen (Water hazard class).

Revision

This SDS replaced the previous release with revision 24122014. Modifications made are marked with #.

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.

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