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Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 30/01/2014 Revision date: 10/03/2015 : Version: 1.2

1.0 – Identification of the substance/mixture and of the company/undertaking

1.1 – Product identification

Trade name		K marker Permanent XP… (ink)
Substance name	:	n/a
Index-No.	:	n/a
CAS-No.	:	n/a
EC-No.	:	n/a

1.2 – Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Preparation for use in writing instruments.
Recommended restrictions on use	:	At this time we do not yet have information on use restrictions. They will be included in this safety data sheet when available.

1.3 – Details of the supplier of the safety data sheet

Company:	Kores CE GmbH Muthgasse 36 1190 Vienna - Austria	
Telephone	:	+43 / 1 / 378 07 55
Fax	:	+43 / 1/ 318 55 77
e-mail address	:	export@kores-ce.at - www.kores.com

1.4 – Emergency telephone number

Emergency telephone	:	112 (EU)

2.0 – Hazards Identification

2.1 – Classification of the substance or mixture

Regulation (EC) No. 1272/2008			
Hazard class	**Hazard category**	**Target organs**	**Hazard statements**
Flammable liquid	2		H225
Eye Irritant	2		H319
Specific target organ toxicity – single exposure	3		H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol/Category of danger	**Risk phrases**
Highly Flammable (F)	R11
Irritant (Xi)	R36, R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

Most important adverse effects

Human health	:	See Section 11 for toxicological information. No further information available.
Physical and chemical hazards	:	See Section 9 for physiochemical information. No further information available.
Potential environmental effects	:	See Section 12 for environmental information. No further information available.

2.2 – Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard symbols:	:		
Signal word	:	Danger	
Hazard statements	:	H225	Highly flammable liquid and vapour.
		H319	Causes serious eye irritation.
		H336	May cause drowsiness or dizziness.
Precautionary statements Prevention	:	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
		P233	Keep container tightly closed.
		P240	Ground/bond container and receiving equipment.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	P305	IF IN EYES: rinse cautiously with water for several minutes.
		P351	Remove contact lenses, if present and easy to do. Continue
		P338	rinsing.
		P337	If eye irritation persists: get medical advice/attention.
		P313	
Storage	:	P403	Store in a well-ventilated place. Keep cool.
		P235	

Labelling according to Directive 67/548/EEC or 1999/45/EC

Hazard symbols :


Signal word : F, Xi

Hazard statements	:	R11	Highly flammable.
		R36	Irritating to eyes.
		R67	Vapours may cause drowsiness and dizziness.
Precautionary statements	:	S7	Keep container tightly closed.
		S16	Keep away from sources of ignition. No smoking.
		S24/25	Avoid contact with skin and eyes.
		S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 – Other hazards

No other information is available.

3.0 – Composition/information on ingredients

3.1 – Substances

Chemical nature : mixture

Chemical name	Index No.	CAS No.	EC No.	Amount (%)
1-Methoxy-2-propanol	603-064-00-3	107-98-2	203-539-1	<75%
Propan-2-ol	603-117-00-0	67-63-0	200-661-7	<20%

Chemical name	Classification according to Regulation (EC) No. 1272/2008	Classification according to Directive 67/548/EEC or 1999/45/EC
1-Methoxy-2-propanol	H226 (3), H336 (3)	R10, R67
Propan-2-ol	H225 (2), H319 (2), H336 (3)	R11, R36, R67

For the full text of the H-Statements mentioned in this Section, see Section 16.

For the full text of the R-phrases mentioned in this Section, see Section 16.

4.0 – First aid measures

4.1 – Description of first aid measures

General advice : Take off all contaminated clothing immediately.

In case of inhalation : Remove to fresh air. If symptoms persist, seek medical advice. If unconscious place in recovery position.

In case of skin contact : Wash off with plenty of water. If skin irritation persists, seek medical advice.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Consult

an eye specialist immediately.

In case of ingestion : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting – seek medical advice.

4.2 – Most important symptoms and effects, both acute and delayed

Symptoms : No further information available.
Effects : No further information available.

4.3 – Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
No further information available.

5.0 – Fire-fighting measures

5.1 – Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media : High volume water jet.

5.2 – Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Highly flammable. Vapours may form explosive mixtures with air. In case of fire hazardous decomposition products may be produced, such as carbon monoxide (CO) and carbon dioxide (CO_2).

5.3 – Advice for fire-fighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit).
Further information : Cool closed containers exposed to fire with water spray. Heating will cause a pressure rise – with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6.0 – Accidental release measures

6.1 – Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe vapours. For personal protection see Section 8.

6.2 – Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3 – Methods and materials for containment and cleaning up

Methods and materials for : Contain spillage, and then collect with non-combustible absorbent

containment and cleaning up		material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).
Further information	:	Treat recovered material as described in Section 13.

6.4 – Reference to other sections

For personal protection see Section 8.

7.0 – Handling and storage

7.1 – Precautions for safe handling

Advice on safe handling	:	Keep container tightly closed. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
Hygiene measures	:	Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of the working day. Take off all contaminated clothing immediately. Avoid contact with skin and eyes. Do not breathe vapours of spray mist.

7.2 – Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep in an area equipped with solvent resistant flooring. Store in original container.
Advice on protection against fire and explosion	:	Combustible liquid. Keep away from sources of ignition – no smoking. Take measures to prevent the build-up of electrostatic charge. Vapours may form explosive mixtures in air. Use only in an area containing explosion proof equipment.
Further information on storage conditions	:	Keep tightly closed in a dry and cool place. Keep in a well-ventilated place. Keep away from heat. Keep away from direct sunlight.
Advice on common storage	:	Incompatible with oxidizing agents. Keep away from food, drink and animal feeding stuffs.

7.3 – Specific end uses

Specific use(s)	:	No information available.

8.0 – Exposure controls/personal protection

8.1 – Control parameters

Component: 1-methoxy-2-propanol		CAS No. 107-98-2
Other OELs		
Regulatory basis	:	EU. Indicative Exposure and Directives relating to the protection of risk related to work exposure to chemical, physical and biological agents.
Regulatory list	:	EU ELV
Value type	:	Time Weighted Average (TWA):
Value	:	100 ppm
Value	:	375 mg/m^3
Remarks	:	Indicative
Regulatory basis	:	EU. Indicative Exposure and Directives relating to the protection of risk related to work exposure to chemical, physical and biological agents.
Regulatory list	:	EU ELV
Value type	:	Short Term Exposure Limit (STEL):
Value	:	150 ppm
Value	:	568 mg/m^3
Remarks	:	Indicative
Regulatory basis	:	UK. EH40 Workplace Exposure Limits (WELS)
Regulatory list	:	EH40 WEL
Value type	:	Short Term Exposure Limit (STEL):
Value	:	150 ppm
Value	:	560 mg/m^3
Regulatory basis	:	UK. EH40 Workplace Exposure Limits (WELS)
Regulatory list	:	EH40 WEL
Value type	:	Skin designation:
Remarks	:	Can be absorbed through the skin.
Regulatory basis	:	UK. EH40 Workplace Exposure Limits (WELS)
Regulatory list	:	EH40 WEL
Value type	:	Time Weighted Average (TWA):
Value	:	100 ppm
Value	:	375 mg/m^3

Component: propan-2-ol; isopropyl alcohol		CAS No. 67-63-0
Other OELs		
Regulatory basis	:	UK. EH40 Workplace Exposure Limits (WELs)
Regulatory list	:	EH40 WEL
Value type	:	Time Weighted Average (TWA):
Value	:	400 ppm
Value	:	999 mg/m^3
Regulatory basis	:	UK. EH40 Workplace Exposure Limits (WELs)
Regulatory list	:	EH40 WEL
Value type	:	Short Term Exposure Limit (STEL):
Value	:	500 ppm
Value	:	1250 mg/m^3

8.2 – Exposure controls

Engineering measures

Refer to protective measures listed in Sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice	:	Use respirator with appropriate filter if vapours or aerosol are released. Recommended filter type: A.

Hand protection

Advice	:	Wear suitable gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Protective gloves should be replaced at first signs of wear.
Material	:	Butyl-rubber
Gloves	:	>= 8 h
Glove thickness	:	0.5 mm

Eye protection

Advice	:	Safety glasses.

Skin and body protection

General advice	:	Wear suitable protective clothing.

Environmental exposure controls

General advice	:	Do not let product enter drains. If the product contaminates rivers and lakes or drains inform respective authorities.

9.0 – Physical and chemical properties

9.1 – Information on basic physical and chemical properties

Form	:	Liquid
Colour	:	Various
Odour	:	Mild. Alcohol-like
Freezing point	:	-89.5°C
Boiling point	:	82°C
Flash point	:	12°C
Upper explosion limit	:	12% (V)
Lower explosion limit	:	2% (V)
Vapour pressure	:	48 hPa 20°C
Relative vapour density	:	2
Water solubility	:	Miscible with water.
Solubility in other solvents	:	Completely miscible.

Partition coefficient: n-octanol/water	:	0.05 Method: OECD Test Guideline 107, literature value
Ignition temperature	:	425°C

9.2 – Other information

No further information available.

10.0 – Stability and reactivity

10.1 – Reactivity

Advice : Stable under recommended storage conditions.

10.2 – Chemical stability

Advice : Stable under normal conditions.

10.3 – Possibility of hazardous reactions

Hazardous reactions : No information available.

10.4 – Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 – Incompatible Materials

Materials to avoid : Strong oxidizing agents, acid anhydrides, air, oxygen, moisture.

10.6 – Hazardous decomposition products

Hazardous decomposition products : Under fire conditions: carbon monoxide (CO), carbon dioxide (CO_2).

11.0 – Toxicological information

11.1 – Information on toxicological effects

Component: 1-methoxy-2-propanol		**CAS No. 107-98-2**
Acute toxicity		
Inhalation		
Value type	:	Acute toxicity estimate
Value	:	54.87 mg/kg
Method	:	Calculation method.
Further information		
Other relevant toxicity information	:	Danger by skin absorption. Liver and kidney injuries may occur.

Component: 1-methoxy-2-propanol	**CAS No. 107-98-2**
Acute toxicity	
Oral	

Value type	: LD50
Value	: 5200 mg/kg
Species	: rat
Inhalation	
Value type	: LC50
Value	: 54.6 mg/kg
Exposure time	: 4 h
Species	: rat
Dermal	
Value type	: LD50
Value	: 14000 mg/kg
Species	: rabbit

Irritation	
Skin	
Species	: rabbit
Result:	: No skin irritation
Eyes	
Species	: rabbit
Result:	: Mild eye irritation

Sensitisation	
Species	: Guinea pig
Result:	: Non sensitizing

Component: propan-2-ol; isopropyl alcohol	**CAS No. 67-63-0**
Acute toxicity	
Oral	
Value type	: LD50
Value	: 5280 mg/kg
Species	: rat
Inhalation	
Value type	: LC50
Value	: 72.6 mg/kg
Exposure time	: 4 h
Species	: rat
Value type	: LC50
Value	: 47.5 mg/l
Exposure time	: 8 h
Species	: rat
Dermal	
Value type	: LD50
Value	: 12800 mg/kg
Species	: rabbit

Irritation	
Skin	
Species	: rabbit

Result	:	No skin irritation
Eyes		
Species	:	rabbit
Result	:	Irritating to eyes
Sensitisation		
Species	:	Guinea pig
Result	:	Not sensitizing
Method	:	Buehler test

Further information		
Other relevant toxicity information	:	All numerical values for acute toxicity are calculated on the pure substances.
Experiences with human exposure	:	Prolonged skin contact may defat the skin and result in dermatitis. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Risk of product entering the lungs on vomiting after ingestions. Liver injury may occur.

12.0 – Ecological information

12.1 – Toxicity

Component: 1-methoxy-2-propanol		**CAS No. 107-98-2**
Acute toxicity		
Fish		
Species	:	Leuciscus idus melanotus
Exposure time	:	96 h
Value type	:	LC0
Value	:	>4600 mg/l
Toxicity to daphnia and other aquatic invertebrates		
Species	:	Daphnia magna
Exposure time	:	48 h
Value type	:	EC50
Value	:	23300 mg/l
Algae		
Species	:	Pseudokirchneriella subcapitata
Exposure time	:	168 h
Value type	:	EC50
Value	:	>1000 mg/l
Bacteria		
Species	:	Activated sludge
Value type	:	EC0
Value	:	>1000 mg/l

Component: propan-2-ol; isopropyl alcohol	**CAS No. 67-63-0**
Acute toxicity	

Fish

Species	:	Pimephales promelas
Exposure time	:	96 h
Value type	:	LC50
Value	:	9640 mg/l

Toxicity to daphnia and other aquatic invertebrates

Species	:	Daphnia magna
Exposure time	:	48 h
Value type	:	EC50
Value	:	13299 mg/l

Algae

Species	:	Desmodesmus subspicatus (green algae)
Exposure time	:	72 h
Value type	:	EC50
Value	:	>1000 mg/l

Bacteria

Species	:	Pseudomonas putide
Exposure time	:	18 h
Value type	:	EC10
Value	:	5175 mg/l
Method	:	DIN 38412
Species	:	Activated sludge
Value type	:	EC50
Value	:	>1000 mg/l
Remarks	:	Respiration inhibition of activated sludge

12.2 – Persistence and degradability

Component: 1-methoxy-2-propanol	CAS No. 107-98-2
Persistence and biodegradability	

Persistence

Remarks	:	No data available.

Biodegradability

Biodegradation	:	90%
Exposure time	:	28 d
Method	:	OECD 301 E
Remarks	:	Readily biodegradable.

Component: propan-2-ol; isopropyl alcohol	CAS No. 67-63-0
Persistence and biodegradability	

Biodegradability

Biodegradation	:	95%
Exposure time	:	21 d
Method	:	OECD 301 E
Remarks	:	Readily biodegradable.

12.3 – Bioaccumulative potential

Component: 1-methoxy-2-propanol		CAS No. 107-98-2
Bioaccumulation		
Remarks	:	Does not bioaccumulate.

Component: propan-2-ol; isopropyl alcohol		CAS No. 67-63-0
Bioaccumulation		
Remarks	:	Does not bioaccumulate.

12.4 – Mobility in soil

Mobile in water environment.

12.5 – Results of PBT and vPvB assessment

No information available.

12.6 – Other adverse effects

All numerical values for ecotoxicity effects are calculated on the pure substances. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

13.0 – Disposal considerations

13.1 – Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not empty into drains. Contact waste disposal services.
Contaminated packaging	:	Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning. Packaging that cannot be cleaned is to be disposed of in the same manner as the product. Do not burn, or use a cutting torch on the empty drum. Risk of explosion.
European Waste Catalogue Number	:	080312 – waste ink containing dangerous substances

14.0 – Transport information

14.1 – UN number

1993

14.2 – UN proper shipping name

ADR	:	Flammable Liquid n.o.s (Contains Isopropanol)
RID	:	Flammable Liquid n.o.s (Contains Isopropanol)
IMDG	:	Flammable Liquid n.o.s (Contains Isopropanol)

14.3 – Transport hazard class(es)

ADR-Class	:	3
(Labels ; classification code ; hazard identification number ; tunnel restriction code)	:	3 ; F1 ; 33 : (D/E)
RID-Class	:	3
(Labels ; classification code ; hazard identification number)		3 : F1 ; 33
IMDG-Class	:	3
(Labels ; EmS)	:	3 ; F-E, S-D

14.4 – Packaging group

ADR	:	II
RID	:	II
IMDG	:	II

14.5 – Environmental hazards

Labelling according to 5.2.1.8 ADR	:	No
Labelling according to 5.2.1.8 RID	:	No
Labelling according to 5.2.1.6.3 IMDG	:	No
Classification as environmentally hazardous according to 2.9.3 IMDG	:	No
Classified as ‘P’ according to 2.10 IMDG	:	No

14.6 – Special precautions for user

Not applicable.

14.7 – Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG	:	Not applicable.

15.0 – Regulatory information

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

1-methoxy-2-propanol;

Regulatory List	Notification	Notification Number
AICS	YES	
DSL	YES	
NV (CN)	YES	
ENCS (JP)	YES	(2)-404
ENCS (JP)	YES	(7)-97
JEX (JP)	YES	(2)-404
SHL (JP)	YES	(2)-404
SHL (JP)	YES	(7)-97
NZ CLSC	YES	
TSCA	YES	
EINECS	YES	203-539-1
KECI (KR)	YES	KE-23379
PICCS (PH)	YES	

15.2 – Chemical safety Assessment

No information available.

16.0 – Other information

16.1 – Full text of R-phrases referred to under Sections 2 and 3

R10	:	Flammable.
R11	:	Highly flammable.
R36	:	Irritating to eyes.
R67	:	Vapours may cause drowsiness and dizziness.

16.2 – Full text of H-Statements referred to under Sections 2 and 3

H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.

16.3 – Further information

Other information	:	The information provided in this safety data sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this safety data sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.
HS Tariff Code	:	32159000