993512 PK4 Lyreco W/Board Marker C/Tip Asstd

Lyreco Group (Lyreco France)

Chemwatch:	4854-62	Print Date:	20/11/2013
Version No:	2.1.1.1	Issue Date:	04/06/2013
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)		S.REACH.GBR.EN	

SECTION 1 Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name:	993512 PK4 Lyreco W/Board Marker C/Tip Asstd
Chemical Name:	Not Applicable
Synonyms:	Product Code: 993512
Proper shipping name:	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C not more than 110 kPa); PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C more than 110 kPa)
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable
EC number:	Not Applicable
Index number:	Not Applicable
REACH registration number:	Not Applicable

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

Relevant identified uses:	Whiteboard marker., NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk.
Uses advised against:	Not Applicable

1.3. Details of the supplier of the safety data sheet

Registered company name:	Lyreco Group (Lyreco France)		
Address:	Rue du 19 Mars 1962 Marly 59770 France		
Telephone:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)		
Fax:	Not Available		
Website:	Not Available		
Email:	Not Available		

1.4. Emergency telephone number

Association / Organisation:	Not Available		
Emergency telephone numbers:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)		
Other emergency telephone numbers:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)		

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Considered a dangerous mixture according to Directive 1999/45/EC, Reg.

ChemWatch Hazard Ratings

		Min/Max
Flammability	3	
Toxicity	2	
Body Contact	2	
Reactivity	1	
Chronic	2	

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

DSD classification:

In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations

DPD classification[1]:

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

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

Classification according to regulation (EC) No 1272/2008 [CLP][1]:

STOT - SE (Narcosis) Category 3, Eye Irritation Category 2, Flammable Liquid Category 2

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

2.2. Label elements

CLP label elements

Signal word:	**DANGER**

Hazard statement(s):	
H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Supplementary statement(s):

Not Applicable

Precautionary statement(s): Prevention	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s): Response	
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use… to extinguish.

Precautionary statement(s): Storage	
P403+P233	Store in a well-ventilated place.
P403+P235	Store in a well-ventilated place.
P405	Store locked up.

Precautionary statement(s): Disposal	
P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

DSD / DPD label elements

Relevant risk statements are found in section 2.1

Indication(s) of danger:	F, Xi

Safety advice:	
S02	Keep out of reach of children.
S09	Keep container in a well ventilated place.
S16	Keep away from sources of ignition.
S23	Do not breathe gas/fumes/vapour/spray.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water.
S41	In case of fire and/or explosion, DO NOT BREATHE FUMES.
S43	In case of fire use...
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well ventilated areas.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

2.3. Other hazards

Inhalation, skin contact and/or ingestion may produce health damage*.

May produce discomfort of the respiratory system and skin*.

Cumulative effects may result following exposure*.

SECTION 3 Composition / information on ingredients

3.1. Substances

See 'Composition on ingredients' in Section 3.2

3.2. Mixtures

1. CAS No 2. EC No	%[weight]	Name	Classification according to directive 67/548/EEC [DSD]	Classification according to regulation (EC) No 1272/2008 [CLP]

3. Index No 4. REACH No				
1. 64-17-5 2. 200-578-6 3. 603-002-00-5 4. 01-2119457610-43-XXXX	>50	ethanol	R11[2]	Flam. ; H225[3]
1. 107-98-2 2. 203-539-1, 216-455-5, 215-306-1 3. 603-064-00-3, 603-106-00-0 4. 01-2119457435-35-XXXX	10-25	propylene glycol monomethyl ether - alpha isomer	R11[2]	Flam. , STOT SE 3, Repr. , Skin Irrit. , Eye Dam. ; H226, H336, H360D ***, H335, H315, H318[3]
1. 67-63-0 2. 200-661-7 3. 603-117-00-0 4. 01-2119457558-25-XXXX	2.5-10	isopropanol	R11, R36, R67[2]	Flam. , Eye Irrit. , STOT SE 3; H225, H319, H336[3]

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

SECTION 4 First aid measures

4.1. Description of first aid measures

General:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.
- If swallowed do **NOT** induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

For acute or short term repeated exposures to ethanol:

- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Eye Contact:

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

Ingestion:

- If swallowed do **NOT** induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to ethanol:

- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- Alcohol stable foam.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3. Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.

Fire/Explosion Hazard:

- Liquid and vapour are highly flammable.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills:

- Remove all ignition sources.

Major Spills:

- Clear area of personnel and move upwind.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling

- **DO NOT**

Fire and explosion protection

See section 5

Other information

- Store in original containers in approved flame-proof area.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container:

- Packing as supplied by manufacturer.

Storage incompatibility:

- Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.

Package Material Incompatibilities:

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Derived No Effect Level (DNEL)

Exposure Pattern	Workers	General Population
Long term - dermal, systemic effects	Not Available	Not Available
Long term - inhalation, systemic effects	Not Available	Not Available
Long term - oral, systemic effects	Not Available	Not Available
Long term - dermal, local effects	Not Available	Not Available
Long term - inhalation, local effects	Not Available	Not Available
Short term - dermal, systemic effects	Not Available	Not Available
Short term - inhalation, systemic effects	Not Available	Not Available
Short term - oral, systemic effects	Not Available	Not Available
Short term - dermal, local effects	Not Available	Not Available
Short term - inhalation, local effects	Not Available	Not Available

Predicted No Effect Level (PNEC)

Compartment	Value
Fresh Water	Not Applicable
Marine Water	Not Applicable
Aqua	Not Applicable
Fresh water sediment	Not Applicable
Marine water sediment	Not Applicable
Soil	Not Applicable

STP	Not Applicable
ORAL	Not Applicable

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	ethanol	Ethanol	1920 (mgm3) / 1000 (ppm)	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	propylene glycol monomethyl ether - alpha isomer	1-Methoxypropan-2-ol	375 (mgm3) / 100 (ppm)	560 (mgm3) / 150 (ppm)	Not Available	Sk
European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)	propylene glycol monomethyl ether - alpha isomer	1-Methoxypropanol-2	375 (mgm3) / 100 (ppm)	568 (mgm3) / 150 (ppm)	Not Available	Skin
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	propylene glycol monomethyl ether - alpha isomer	1-Methoxypropan-2-ol	375 (mgm3) / 100 (ppm)	568 (mgm3) / 150 (ppm)	Not Available	Skin
UK Workplace Exposure Limits (WELs)	isopropanol	Propan-2-ol	999 (mgm3) / 400 (ppm)	1250 (mgm3) / 500 (ppm)	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
ethanol	1000(ppm)	3000(ppm)	3300(ppm)	3300(ppm)
propylene glycol monomethyl ether - alpha isomer	100(ppm)	150(ppm)	300(ppm)	750(ppm)
isopropanol	400(ppm)	400(ppm)	2000(ppm)	2000(ppm)

Ingredient	Original IDLH	Revised IDLH
ethanol	15,000(ppm)	3,300 [LEL](ppm)
isopropanol	12,000(ppm)	2,000 [LEL](ppm)

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.

8.2.2. Personal protection

Eye and face protection:

- Safety glasses with side shields.

Skin protection:

See Hand protection below

Hand protection:

- Wear chemical protective gloves, e.g. PVC.

Body protection:

See Other protection below

Other protection:

- Overalls.

Thermal hazards:

Recommended material(s):

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
993512 PK4 Lyreco W/Board Marker C/Tip Asstd

Material	CPI
NEOPRENE	A
NITRILE	B
PVC	B

* CPI - Chemwatch Performance Index

Respiratory protection:

Type A Filter of sufficient capacity.

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+			Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Coloured highly flammable liquid with a characteristic odour; mixes with water.

Physical state	Liquid	**Relative density (Water = 1)**	0.860
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	287 (ignition temp.)
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	8
Initial boiling point and boiling range (°C)	78	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	13	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	15.0	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	1.7	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	5.9	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution(1%)**	Not Available
Vapour density (Air = 1)	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1. Reactivity:

See section 7.2

10.2. Chemical stability:

- Presence of incompatible materials.

10.3. Possibility of hazardous reactions:

See section 7.2

10.4. Conditions to avoid:

See section 7.2

10.5. Incompatible materials:

See section 7.2

10.6. Hazardous decomposition products:

See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Inhaled:

Inhalation of vapours may cause drowsiness and dizziness.

Ingestion:

Accidental ingestion of the material may be damaging to the health of the individual.

Skin Contact:

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

Eye:

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Chronic:

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

TOXICITY	IRRITATION
993512 PK4 Lyreco W/Board Marker C/Tip Asstd	
Not Available	Not Available
ethanol	
Inhalation (rat) LC50: 20,000 ppm/10h	Eye (rabbit): 500 mg SEVERE
Inhalation (rat) LC50: 64000 ppm/4h	Eye (rabbit):100mg/24hr-moderate
Oral (rat) LD50: 7060 mg/kg	Skin (rabbit):20 mg/24hr-moderate
	Skin (rabbit):400 mg (open)-mild
Not Available	Not Available
propylene glycol monomethyl ether - alpha isomer	
Dermal (rabbit) LD50: 13000 mg/kg	Eye (rabbit) 230 mg mild
Inhalation (rat) LC50: 10000 ppm/5 h.	Eye (rabbit) 500 mg/24 h.
Oral (rat) LD50: 3739 mg/kg	Eye (rabbit): 100 mg SEVERE
	Skin (rabbit) 500 mg open - mild
Not Available	Not Available
isopropanol	
Dermal (rabbit) LD50: 12800 mg/kg	Eye (rabbit): 10 mg - moderate
Inhalation (Mouse) LC50: 53000 mg/m3/4h	Eye (rabbit): 100 mg - SEVERE
Inhalation (Rat) LC50: 72600 mg/m3/4h	Eye (rabbit): 100mg/24hr-moderate
Intraperitoneal (Guinea pig) LD50: 2560 mg/kg	Skin (rabbit): 500 mg - mild
Intraperitoneal (Mouse) LD50: 4477 mg/kg	
Intraperitoneal (Rabbit) LD50: 667 mg/kg	
Intraperitoneal (Rat) LD50: 2735 mg/kg	
Intravenous (Mouse) LD50: 1509 mg/kg	
Intravenous (Rabbit) LD50: 1184 mg/kg	
Intravenous (Rat) LD50: 1088 mg/kg	
Oral (Mouse) LD50: 3600 mg/kg	

Oral (Rabbit) LD50: 6410 mg/kg

Oral (Rat) LD50: 5000 mg/kg	
Oral (rat) LD50: 5045 mg/kg	
Not Available	Not Available

* Value obtained from manufacturer's msds

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No significant acute toxicological data identified in literature search.

ETHANOL

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).

PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER

for propylene glycol ethers (PGEs):
NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm.

ISOPROPANOL

For isopropanol (IPA):

Acute Toxicity:	Not Applicable	**Carcinogenicity:**	Not Applicable
Skin Irritation/Corrosion:	Not Applicable	**Reproductivity:**	Not Applicable
Serious Eye Damage/Irritation:	Eye Irrit.	**STOT - Single Exposure:**	STOT - SE (Narcosis) Category 3
Respiratory or Skin sensitisation:	Not Applicable	**STOT - Repeated Exposure:**	Not Applicable
Mutagenicity:	Not Applicable	**Aspiration Hazard:**	Not Applicable

CMR STATUS

SKIN

propylene glycol monomethyl ether - alpha isomer	European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) - Skin	Skin

SECTION 12 Ecological information

12.1. Toxicity

DO NOT

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

12.4. Mobility in soil

Ingredient	Mobility
Not Available	Not Available

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT and vPvB Criteria fulfilled?	Not Available	Not Available	Not Available

12.6. Other adverse effects

No data available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal:

- Recycle wherever possible or consult manufacturer for recycling options.

Waste treatment options:

Sewage disposal options:

No relevant data

SECTION 14 Transport information

Labels Required:

Marine Pollutant: NO

HAZCHEM: •3YE; •3Y

Land transport (ADR)

14.1. UN number	1263	**14.4. Packing group**	II
14.2. UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing	**14.5. Environmental hazard**	No relevant data

	compound) (vapour pressure at 50 °C not more than 110 kPa); PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C more than 110 kPa)		

14.3. Transport hazard class(es)	Class: 3 Subrisk:	**14.6. Special precautions for user**	Hazard identification (Kemler): 33 Classification code: F1 Hazard Label: 3 Special provisions: 163 640D 650; 163 640C 650 limited quantity: 5 L

Air transport (ICAO-IATA / DGR)

14.1. UN number	1263	**14.4. Packing group**	II
14.2. UN proper shipping name	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds)	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	ICAO/IATA Class: 3 ICAO / IATA Subrisk: ERG Code: 3L	**14.6. Special precautions for user**	Special provisions: A3A72 Cargo Only Packing Instructions: 364 Cargo Only Maximum Qty / Pack: 60 L Passenger and Cargo Packing Instructions: 353 Passenger and Cargo Maximum Qty / Pack: 5 L Passenger and Cargo Limited Quantity Packing Instructions: Y341 Passenger and Cargo Maximum Qty / Pack: 1 L

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1263	**14.4. Packing group**	II
14.2. UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	IMDG Class: 3 IMDG Subrisk:	**14.6. Special precautions for user**	EMS Number: F-E,S-E Special provisions: 163 Limited Quantities: 5 L

Inland waterways transport (ADN)

14.1. UN number	1263	**14.4. Packing group**	II
14.2. UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound); PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C more than 110 kPa); PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C not more than 110 kPa)	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	3:	**14.6. Special precautions for user**	Classification code: C9; F1 Limited quantity: 1 L; 5 L Equipment required: PP, EP; PP, EX, A Fire cones number: 0; 1

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category	Residual Concentration - Outside Special Area (% w/w)	Residual Concentratio
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	ethanol	Not Available	Not Available	Not Available
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	isopropanol	Not Available	Not Available	Not Available

SECTION 15 Regulatory information

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

ethanol(64-17-5) is found on the following regulatory lists

"World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (French)","World Anti-Doping Agency - The 2012 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports","IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO","World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (Korean)","World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Competition (German)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","International Air Transport Association (IATA) Dangerous Goods Regulations","FisherTransport Information","Sigma-AldrichTransport Information","Acros Transport Information","IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances","IOFI Global Reference List of Chemically Defined Substances","International Fragrance Association (IFRA) Survey: Transparency List","FEMA Generally Recognized as Safe (GRAS) Flavoring Substances 23 - Examples of FEMA GRAS Substances with Non-Flavor Functions","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","IMO IBC Code Chapter 18: List of products to which the Code does not apply","UK Workplace Exposure Limits (WELs)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","Europe ECHA Registered Substances - Classification and Labelling - GHS","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe Substances Listed in EU Directives on Plastics in Contact with Food","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","Europe Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food - Annex I: Substances","European Union (EU) Inventory of Fragrance Ingredients (Perfume and Aromatic Raw Materials)","EU list of flavouring substances which can be used in food -Regulation EU 872/2012","European Union Register of Feed Additives pursuant to Regulation (EC) No 1831/2003 - Annex I: List of Additives","Europe SCCNFP First Update of the Inventory of Ingredients Employed in Cosmetic Products - Section II: Perfume and Aromatic Raw Materials","Europe European Commission Database of flavouring substances","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Maritime Dangerous Goods Requirements (IMDG Code)","UK Dangerous Goods Emergency Action Code List 2013","ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Directive 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III","UK Pollution Inventory - Form PI-3 (EPRTR): Pollution Inventory reporting – E-PRTR - Part 2 Releases to air","UK Pollution Inventory - Form PI–2: Pollution Inventory reporting - Part 2 Releases to air","UK Pollution Inventory - Form PI–1: Pollution Inventory reporting - Part 2 Releases to air","Scotland Pollution Inventory","Europe Pollutant Release and Transfer Register (E-PRTR) (166/2006) - Threshold Quantities","Europe Pollutant Emission Register (EPER) (2000/479/EC) - Threshold Quantities","IMO IBC Code Chapter 17: Summary of minimum requirements","OSPAR National List of Candidates for Substitution – Norway"

propylene glycol monomethyl ether - alpha isomer(107-98-2) is found on the following regulatory lists

"FisherTransport Information","Sigma-AldrichTransport Information","International Fragrance Association (IFRA) Survey: Transparency List","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","UK Workplace Exposure Limits (WELs)","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","Europe SCCNFP First Update of the Inventory of Ingredients Employed in Cosmetic Products - Section II: Perfume and Aromatic Raw Materials","European Union (EU) Inventory of Fragrance Ingredients (Perfume and Aromatic Raw Materials)","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","Chemwatch Candidate List of Very High Concern - List of Substance Subject to Authorization","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe ECHA Registered Substances - Classification and Labelling - GHS","EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Maritime Dangerous Goods Requirements (IMDG Code)","UK Dangerous Goods Emergency Action Code List 2013","ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways","International Chemical Secretariat (ChemSec) SIN List (*Substitute It Now!)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances (updated by ATP: 31) - Reprotoxic Substances","EU Cosmetic Directive 76/768/EEC Annex II: List of Substances which must not form part of the Composition of Cosmetic Products (English)","EU Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products - Annex II - List of Substances Prohibited in Cosmetic Products","EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 6) Toxic to reproduction: category 1B (Table 3.1)/category 2 (Table 3.2)","Europe AeroSpace and Defence Industries Association of Europe (ASD) REACH Implementation Working Group Priority Declarable Substances List (PDSL)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Directive 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances","GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","OSPAR National List of Candidates for Substitution – Norway","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III","EU Council Directive 98/83/EC on the quality of water intended for human consumption - Chemical Parameters","IMO IBC Code Chapter 17: Summary of minimum requirements"

isopropanol(67-63-0) is found on the following regulatory lists

"IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO","GESAMP/EHS Composite List - GESAMP Hazard Profiles","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","FisherTransport Information","Sigma-AldrichTransport Information","Acros Transport Information","IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances","IOFI Global Reference List of Chemically Defined Substances","International Fragrance Association (IFRA) Survey: Transparency List","OECD List of High Production Volume (HPV) Chemicals","IMO IBC Code Chapter 18: List of products to which the Code does not apply","UK Workplace Exposure Limits (WELs)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","Europe ECHA Registered Substances - Classification and Labelling - GHS","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe Substances Listed in EU Directives on Plastics in Contact with Food","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","Europe Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food - Annex I: Substances","European Union (EU) Inventory of Fragrance Ingredients (Perfume and Aromatic Raw Materials)","EU list of flavouring substances which can be used in food -Regulation EU 872/2012","European Union Register of Feed Additives pursuant to Regulation (EC) No 1831/2003 - Annex I: List of Additives","Europe SCCNFP First Update of the Inventory of Ingredients Employed in Cosmetic Products - Section II: Perfume and Aromatic Raw Materials","Europe European Commission Database of flavouring substances","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Maritime Dangerous Goods Requirements (IMDG Code)","UK Dangerous Goods Emergency Action Code List 2013","ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Directive 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III","IMO IBC Code Chapter 17: Summary of minimum requirements","OSPAR National List of Candidates for Substitution – Norway"

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
ethanol	64-17-5	603-002-00-5	01-2119457610-43-XXXX

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Liq. 2	GHS02, Dgr	H225

2	**Flam. Liq. 2, Eye Irrit. 2, Aquatic Chronic 2, STOT SE 3, Repr. 2, STOT RE 1, Not Classified, Skin Irrit. 2, Acute Tox. 4, STOT SE 2, Muta. 1B, Repr. 1A, Acute Tox. 3, STOT SE 1, Met. Corr. 1, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1**	**Dgr, GHS01, GHS09, GHS08, Wng, GHS06, GHS05**	**H225, H319, H411, H340, H304, H372, H315, H220, H360, H301, H311, H331, H370**

Ingredient	**CAS number**	**Index No**	**ECHA Dossier**
propylene glycol monomethyl ether - alpha isomer	107-98-2	603-064-00-3, 603-106-00-0	01-2119457435-35-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
2	**Flam. Liq. 3, STOT SE 3, Not Classified, Eye Irrit. 2, Skin Irrit. 2, Eye Dam. 1, Repr. 1B, Flam. Liq. 2**	**GHS02, Wng, GHS08, GHS03, GHS05, Dgr**	**H371, H225, H226, H315, H318, H360, H370**
1	**Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, Repr. 1B**	**GHS07, GHS02, Wng, GHS05, GHS08, Dgr**	**H226, H336, H315, H318, H335, H360**

Ingredient	**CAS number**	**Index No**	**ECHA Dossier**
isopropanol	67-63-0	603-117-00-0	01-2119457558-25-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
2	**Flam. Liq. 2, Eye Irrit. 2, STOT SE 3, STOT SE 1, Not Classified, Eye Irrit. 2A, Repr. 2, STOT RE 2, Flam. Liq. 3**	**GHS02, Dgr, GHS08, GHS03**	**H225, H319, H370, H340, H312, H302, H361, H373**
1	**Flam. Liq. 2, Eye Irrit. 2, STOT SE 3**	**GHS07, GHS02, Dgr**	**H225, H319, H336**

SECTION 16 Other information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards: