

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

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Revision Number 1
ENG

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code(s) LK2-CB109501

Product Name Method 8260 Gases, 2,000 mg/L

CAS No. Not applicable

Contains Methyl alcohol, bromomethane, vinyl chloride, trichlorofluoromethane, dichlorodifluoromethane

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

Recommended Use Laboratory chemicals
Production of chemical substance

Uses advised against Not for human consumption

1.3. Details of the supplier of the safety data sheet

Manufacturer

LabKings B.V
Utrechtseweg 5, 1213TK Hilversum, The Netherlands
+31 84 875 63 44
www.labkings.com

1.4. Emergency telephone number

Emergency Telephone Chemtrec, Inside the USA: 1-800-424-9300
Chemtrec, Outside the USA: 001-703-527-3887

Europe	112
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Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 3 - (H301)
Acute toxicity - Dermal	Category 3 - (H311)
Acute toxicity - Inhalation (Dusts/Mists)	Category 3 - (H331)
Carcinogenicity	Category 1A - (H350)
Specific target organ toxicity (single exposure)	Category 1 - (H370)
Ozone	Category 1 - (H420)
Flammable liquids	Category 2 - (H225)

2.2. Label elements

Regulation (EC) No 1272/2008

Contains Methyl alcohol, bromomethane, vinyl chloride, trichlorofluoromethane, dichlorodifluoromethane

**Signal word**

Danger

Hazard statements

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

H350 - May cause cancer

H370 - Causes damage to organs

H420 - Harms public health and the environment by destroying ozone in the upper atmosphere

H225 - Highly flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse

P321 - Specific treatment (see supplemental first aid instructions on this label)

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P201 - Obtain special instructions before use

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

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P307 + P311 - IF exposed: Call a POISON CENTER or doctor/physician

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

The exact concentration of each component can be found on the Certificate of Analysis

Chemical name	CAS No.	Molecular weight (g/mol)	Weight-%
Methyl alcohol	67-56-1	32.04	90-100
vinyl chloride	75-01-4	62.49	0.2
trichlorofluoromethane	75-69-4	137.36	0.2
dichlorodifluoromethane	75-71-8	120.91	0.2
chloromethane	74-87-3	50.48	0.2
chloroethane	75-00-3	64.51	0.2
bromomethane	74-83-9	94.93	0.2

3.2 Mixtures

Chemical name	CAS No.	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methyl alcohol	67-56-1	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)

		Flam. Liq. 2 (H225)
vinyl chloride	75-01-4	Carc. 1A (H350) Flam. Gas 1 (H220) Press. Gas
trichlorofluoromethane	75-69-4	No data available
dichlorodifluoromethane	75-71-8	No data available
chloromethane	74-87-3	Carc. 2 (H351) STOT RE 2 (H373) Flam. Gas 1 (H220) Press. Gas
chloroethane	75-00-3	Carc. 2 (H351) Aquatic Chronic 3 (H412) Flam. Gas 1 (H220) Press. Gas
bromomethane	74-83-9	Acute Tox. 3 (H301) Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Muta. 2 (H341) STOT SE 3 (H335) STOT RE 2 (H373) Aquatic Acute 1 (H400) Ozone 1 (H420) Press. Gas

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Do not induce vomiting. Call a physician or poison control center immediately.

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

Symptoms	Difficulty in breathing. May cause blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO₂, alcohol-resistant foam or water spray.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Flammable. Risk of ignition. Vapors may form explosive mixture with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Hazardous combustion products Carbon monoxide (CO). Formaldehyde.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Place in appropriate chemical waste container.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Advice on safe handling Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protection equipment. Handle in a fume cupboard. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. Take precautionary measures against static discharges.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep away from open flames, hot surfaces and sources of ignition. Keep container tightly closed in a dry and well-ventilated place. For more information, see product label and/or certificate of analysis.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters**Exposure Limits**

Chemical name	European Union	United Kingdom	France	Spain	Germany
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ *	TWA: 200 ppm TWA: 266 mg/m ³ STEL: 250 ppm STEL: 333 mg/m ³ Sk*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1300 mg/m ³ *	TWA: 200 ppm TWA: 266 mg/m ³ vía dérmica*	TWA: 200 ppm TWA: 270 mg/m ³ H*
vinyl chloride 75-01-4	TWA 3 ppm measured or calculated in relation to a reference period of eight hours TWA 7.77 mg/m ³ measured or calculated in relation to a reference period of eight hours	TWA: 3 ppm TWA: 7.8 mg/m ³ STEL: 9 ppm STEL: 23.4 mg/m ³	TWA: 1 ppm TWA: 2.59 mg/m ³	TWA: 3 ppm TWA: 7.8 mg/m ³	-
trichlorofluoromethane 75-69-4	-	-	STEL: 1000 ppm STEL: 5600 mg/m ³	STEL: 1000 ppm STEL: 5720 mg/m ³	TWA: 1000 ppm TWA: 5700 mg/m ³
dichlorodifluoromethane 75-71-8	-	-	TWA: 1000 ppm TWA: 4950 mg/m ³	TWA: 1000 ppm TWA: 4115 mg/m ³	TWA: 1000 ppm TWA: 5000 mg/m ³
chloromethane 74-87-3	-	TWA: 50 ppm TWA: 105 mg/m ³ STEL: 100 ppm STEL: 210 mg/m ³	TWA: 50 ppm TWA: 105 mg/m ³ STEL: 100 ppm STEL: 210 mg/m ³	TWA: 50 ppm TWA: 105 mg/m ³ STEL: 100 ppm STEL: 210 mg/m ³ vía dérmica*	TWA: 50 ppm TWA: 100 mg/m ³ H*
chloroethane 75-00-3	TWA: 100 ppm TWA: 268 mg/m ³	TWA: 50 ppm TWA: 134 mg/m ³ STEL: 150 ppm STEL: 402 mg/m ³	TWA: 100 ppm TWA: 268 mg/m ³	TWA: 100 ppm TWA: 268 mg/m ³	TWA: 40 ppm TWA: 110 mg/m ³
bromomethane 74-83-9	-	TWA: 5 ppm TWA: 20 mg/m ³ STEL: 15 ppm STEL: 59 mg/m ³ Sk*	TWA: 5 ppm TWA: 20 mg/m ³	TWA: 1 ppm TWA: 4 mg/m ³ vía dérmica*	TWA: 1 ppm TWA: 3.9 mg/m ³
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ pelle*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm P*	TWA: 133 mg/m ³ TWA: 100 ppm H*	TWA: 200 ppm TWA: 270 mg/m ³ STEL: 250 ppm STEL: 330 mg/m ³ iho*	TWA: 200 ppm TWA: 260 mg/m ³ H*
vinyl chloride 75-01-4	TWA: 3 ppm TWA: 7.77 mg/m ³	TWA: 1 ppm	TWA: 7.77 mg/m ³	TWA: 3 ppm TWA: 7.7 mg/m ³	TWA: 1 ppm TWA: 3 mg/m ³ H*
trichlorofluoromethane	-	Ceiling: 1000 ppm	-	TWA: 1000 ppm	TWA: 500 ppm

75-69-4				TWA: 5600 mg/m ³ STEL: 1300 ppm STEL: 7000 mg/m ³	TWA: 2810 mg/m ³
dichlorodifluoromethane 75-71-8	-	TWA: 1000 ppm	-	TWA: 1000 ppm TWA: 5000 mg/m ³ STEL: 1300 ppm STEL: 6500 mg/m ³	TWA: 500 ppm TWA: 2475 mg/m ³
chloromethane 74-87-3	-	TWA: 50 ppm STEL: 100 ppm P*	-	TWA: 50 ppm TWA: 100 mg/m ³ STEL: 75 ppm STEL: 160 mg/m ³	TWA: 25 ppm TWA: 52 mg/m ³
chloroethane 75-00-3	TWA: 100 ppm TWA: 268 mg/m ³	TWA: 100 ppm TWA: 268 mg/m ³ P*	TWA: 268 mg/m ³	TWA: 100 ppm TWA: 268 mg/m ³ iho*	TWA: 100 ppm TWA: 269 mg/m ³ H*
bromomethane 74-83-9	-	TWA: 1 ppm P*	-	TWA: 5 ppm TWA: 20 mg/m ³ STEL: 10 ppm STEL: 39 mg/m ³ iho*	TWA: 5 ppm TWA: 20 mg/m ³ H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ STEL 800 ppm STEL 1040 mg/m ³ H*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 800 ppm STEL: 1040 mg/m ³ H*	STEL: 300 mg/m ³ TWA: 100 mg/m ³	TWA: 100 ppm TWA: 130 mg/m ³ STEL: 100 ppm STEL: 130 mg/m ³ H*	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 600 ppm STEL: 780 mg/m ³ Sk*
vinyl chloride 75-01-4	-	TWA: 2 ppm TWA: 5.2 mg/m ³	STEL: 30 mg/m ³ TWA: 5 mg/m ³	TWA: 1 ppm TWA: 3 mg/m ³ STEL: 1 ppm STEL: 3 mg/m ³	TWA: 3 ppm TWA: 7.77 mg/m ³ STEL: 9 ppm STEL: 23.31 mg/m ³
trichlorofluoromethane 75-69-4	TWA: 1000 ppm TWA: 5600 mg/m ³ STEL 2000 ppm STEL 11200 mg/m ³	TWA: 1000 ppm TWA: 5600 mg/m ³	ceiling: 5600 mg/m ³	TWA: 500 ppm TWA: 2800 mg/m ³ STEL: 500 ppm STEL: 2800 mg/m ³	TWA: 1000 ppm TWA: 5600 mg/m ³ STEL: 1250 ppm STEL: 7000 mg/m ³
dichlorodifluoromethane 75-71-8	TWA: 1000 ppm TWA: 5000 mg/m ³ STEL 2000 ppm STEL 10000 mg/m ³	TWA: 1000 ppm TWA: 5000 mg/m ³	STEL: 6200 mg/m ³ TWA: 4000 mg/m ³	TWA: 500 ppm TWA: 2475 mg/m ³ STEL: 500 ppm STEL: 2475 mg/m ³	TWA: 1000 ppm TWA: 4950 mg/m ³ STEL: 1250 ppm STEL: 6200 mg/m ³
chloromethane 74-87-3	TWA: 50 ppm TWA: 105 mg/m ³ STEL 200 ppm STEL 420 mg/m ³ H*	TWA: 50 ppm TWA: 105 mg/m ³ STEL: 100 ppm STEL: 210 mg/m ³	TWA: 20 mg/m ³	TWA: 25 ppm TWA: 50 mg/m ³ STEL: 25 ppm STEL: 50 mg/m ³	TWA: 50 ppm TWA: 105 mg/m ³ STEL: 100 ppm STEL: 210 mg/m ³
chloroethane 75-00-3	H*	TWA: 9 ppm TWA: 25 mg/m ³ H*	TWA: 200 mg/m ³	TWA: 100 ppm TWA: 270 mg/m ³ STEL: 100 ppm STEL: 270 mg/m ³	TWA: 100 ppm TWA: 268 mg/m ³ STEL: 300 ppm STEL: 804 mg/m ³
bromomethane 74-83-9	H*	TWA: 1 ppm TWA: 3.9 mg/m ³ STEL: 2 ppm STEL: 7.8 mg/m ³	STEL: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 5 ppm TWA: 20 mg/m ³ STEL: 5 ppm STEL: 20 mg/m ³ H*	TWA: 5 ppm TWA: 20 mg/m ³ STEL: 15 ppm STEL: 60 mg/m ³ Sk*

Biological occupational exposure limits

Chemical name	European Union	United Kingdom	France	Spain	Germany
Methyl alcohol 67-56-1	-	-	-	15	30 mg/L
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Methyl alcohol 67-56-1	-	30	-	-	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls	Showers, eyewash stations, and ventilation systems. Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.
Personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Hand Protection	Protective gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Wash hands thoroughly after handling.
Skin and body protection	Chemical resistant apron. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	May vary
Odor	May vary.
Color	May vary
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	-98 °C	None known
Boiling point / boiling range	64.7 °C	None known
Flash point	12 °C	None known
Evaporation rate	5.2 (ether = 1)	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	31.00 vol%	
Lower flammability limit:	6.0 vol%	
Vapor pressure	128 hPa	None known
Vapor density	1.11	None known
Relative density	0.791	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	455 °C	None known
Decomposition temperature	No data available	None known

Kinematic viscosity	0.55 cP at 20°C	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight (g/mol)	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity	No information available.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge May be ignited by heat, sparks or flames.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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Hazardous polymerization	Hazardous polymerization does not occur.
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10.4. Conditions to avoid

Conditions to avoid	Incompatible materials. Heat, flames and sparks. Keep away from open flames, hot surfaces and sources of ignition.
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10.5. Incompatible materials

Incompatible materials	Strong oxidizing agents. Strong acids. Acid anhydrides. Acid chlorides. Strong bases. Metals. Peroxides.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Carbon monoxide (CO). Formaldehyde.
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Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Information on likely routes of exposure****Product Information**

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Information on toxicological effects

Symptoms May cause blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. May cause cancer.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 101.00 mg/kg
ATEmix (dermal) 304.00 mg/kg
ATEmix (inhalation-dust/mist) 0.51 mg/l

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity.

1 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

1.2 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl alcohol	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h
vinyl chloride	= 500 mg/kg (Rat)		= 18 pph (Rat) 15 min
trichlorofluoromethane	> 15000 mg/kg (Rat)		= 26200 ppm (Rat) 4 h
chloromethane	= 1800 mg/kg (Rat)		= 5300 mg/m ³ (Rat) 4 h
chloroethane			= 152 g/m ³ (Rat) 2 h
bromomethane	= 214 mg/kg (Rat)		= 302 ppm (Rat) 8 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation May cause eye irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity Contains a known or suspected mutagen.

Chemical name	European Union
bromomethane	Muta. 2

Carcinogenicity Contains a known or suspected carcinogen. May cause cancer.

Chemical name	European Union
vinyl chloride	Carc. 1A
chloromethane	Carc. 2
chloroethane	Carc. 2

Reproductive toxicity Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental toxicity Contains ingredients that have suspected developmental hazards.

Teratogenicity Animal experiments showed mutagenic and teratogenic effects.

STOT - single exposure optic nerve.

H370 - Causes damage to the following organs: Central nervous system, retina, systemic toxicity.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated. Should not be released into the environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Methyl alcohol	-	28200: 96 h Pimephales promelas mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	-
vinyl chloride	943: 48 h Chilomonas paramecium mg/L EC50	210: 96 h Brachydanio rerio mg/L LC50	-	-
trichlorofluoromethane	-	190: 96 h Salmo gairdneri mg/L LC50 flow-through	-	130: 48 h Daphnia magna mg/L EC50
chloromethane	-	550: 96 h Lepomis macrochirus mg/L LC50 static	-	-
chloroethane	39: 72 h Desmodesmus subspicatus mg/L EC50	-	-	58: 48 h Daphnia magna mg/L EC50
bromomethane	3.2: 48 h Scenedesmus quadricauda mg/L EC50	0.8: 96 h Poecilia reticulata mg/L LC50 semi-static 11: 96 h Lepomis macrochirus mg/L LC50 static 0.7: 96 h Oryzias latipes mg/L LC50 semi-static	-	1.7: 48 h Daphnia magna mg/L EC50 Static 2: 48 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Chemical name	Partition coefficient
Methyl alcohol	-0.77
vinyl chloride	1.58
trichlorofluoromethane	2.5
dichlorodifluoromethane	2.2
chloromethane	0.91

chloroethane	1.52
bromomethane	99

12.4. Mobility in soil

Mobility in soil No information available.

Mobility Will likely be mobile in the environment due to its volatility.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

Other adverse effects No information available.

Endocrine Disruptor Information

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances
bromomethane	Group II Chemical	-

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no. UN1230
14.2 Proper shipping name Methanol
14.3 Hazard Class 3
14.4 Packing Group II
14.5 Marine pollutant No information available
14.6 Special Provisions No information available
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

RID

14.1 UN/ID no. UN1230
14.2 Proper shipping name Methanol
14.3 Hazard Class 3
14.4 Packing Group II
14.5 Environmental hazard No information available
14.6 Special Provisions No information available

ADR

14.1 UN/ID no. UN1230
14.2 Proper shipping name Methanol
14.3 Hazard Class 3
14.4 Packing Group II
14.5 Environmental hazard No information available

14.6 Special Provisions No information available

IATA

14.1 UN/ID no. UN1230
14.2 Proper shipping name Methanol
14.3 Hazard Class 3
Subsidiary hazard class 6.1
14.4 Packing Group II
14.5 Environmental hazard No information available
14.6 Special Provisions No information available

Section 15: REGULATORY INFORMATION

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

France**Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
Methyl alcohol 67-56-1	RG 84	-
vinyl chloride 75-01-4	RG 52	-
trichlorofluoromethane 75-69-4	RG 12	-
chloromethane 74-87-3	RG 27	-
chloroethane 75-00-3	RG 12	-
bromomethane 74-83-9	RG 26	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
vinyl chloride - 75-01-4	2. 28.	

Persistent Organic Pollutants

Not applicable

Export Notification requirements

This product contains substances which are regulated pursuant to Regulation (EC) No. 689/2008 of the European parliament and of the council concerning the export and import of dangerous chemicals

Chemical name	European Export/Import Restrictions per (EC) 689/2008 - Annex Number
bromomethane - 74-83-9	I.1 I.2

Named dangerous substances per Seveso Directive (2012/18/EU)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Methyl alcohol - 67-56-1	500	5000

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Harms public health and the environment by destroying ozone in the upper atmosphere

Chemical name	Ozone depletion potential (ODP)	Ozone-depleting substances (ODS)
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		regulation (EC) 1005/2009
trichlorofluoromethane - 75-69-4	1.0 ODP	Group I: Chlorofluorocarbons (CFCs)
dichlorodifluoromethane - 75-71-8	1.0 ODP	Group I: Chlorofluorocarbons (CFCs)
chloromethane - 74-87-3	0.02 ODP	Subject to reporting requirement
bromomethane - 74-83-9	0.6 ODP	Group VI: Methyl bromide Group V: 1,1,1-Trichloroethane

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

X - Listed**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**15.2. Chemical safety assessment****Chemical Safety Report**

A Chemical Safety Assessment has not been carried out for this substance

Section 16: OTHER INFORMATION**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H331 - Toxic if inhaled

H370 - Causes damage to organs if swallowed

H225 - Highly flammable liquid and vapor

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H341 - Suspected of causing genetic defects if swallowed

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

H400 - Very toxic to aquatic life

H420 - Harms public health and the environment by destroying ozone in the upper atmosphere

H351 - Suspected of causing cancer if swallowed

H220 - Extremely flammable gas

H412 - Harmful to aquatic life with long lasting effects

H350 - May cause cancer in contact with skin

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling

Maximum limit value

*

Skin designation

Issuing Date 28-Jul-2016**Revision Date** 28-Jul-2016

Reason for revision SDS sections updated

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**Disclaimer**

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End of Safety Data Sheet