Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Reference number: EIGA009
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Name	:	Bromomethane (R40 B1)
EC Index-No.	:	602-002-00-2
EC-No.	:	200-813-2
CAS-No.	:	74-83-9
REACH registration No	:	Registration not required. Substance manufactured or imported <1T/y for non-intermediate uses.
Product code	:	000010021848
Formula	:	CH3Br
Synonyms	:	Methylbromide

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

1.2.1. Relevant identified uses

Relevant identified uses	:	Industrial use. Perform risk assessment prior to use. Test gas/Calibration gas. Chemical reaction / Synthesis. Laboratory use.
Use of the substance/mixture	:	Formulation of mixtures with gas in pressure receptacles. Industrial and professional. Perform risk assessment prior to use.

1.2.2. Uses advised against

Uses advised against	:	Consumer use. Uses other than those listed above are not supported, contact your supplier for more information on other uses.

1.3. Details of the supplier of the safety data sheet

Linde Gas GmbH
Carl-von-Linde-Platz 1
A-4651 Stadl-Paura
Austria
T +43 50 4273
office@at.linde-gas.com

1.4. Emergency telephone number

Emergency number	:	UMCO/NCEC: +44 1865 407333 (English); +49 89 220 61012 (German)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical hazards	Flammable gases, Category 2	H221

	Gases under pressure : Liquefied gas	H280
Health hazards	Acute toxicity (oral), Category 3	H301
	Skin corrosion/irritation, Category 2	H315
	Serious eye damage/eye irritation, Category 2	H319
	Acute toxicity (inhalation:gas) Category 2	H330
	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
	Germ cell mutagenicity, Category 2	H341
	Specific target organ toxicity – Repeated exposure, Category 2	H373
Environmental hazards	Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Additional hazards	Hazardous to the ozone layer – category 1	H420

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS04 GHS06 GHS08 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H221 - Flammable gas.
H280 - Contains gas under pressure; may explode if heated.
H301 - Toxic if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.
H341 - Suspected of causing genetic defects.
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.
H420 - Harms public health and the environment by destroying ozone in the upper atmosphere.

Precautionary statements (CLP)

- Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 - Do not breathe gas, vapours.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

- Response : P304+P340+P315 - IF INHALED : Remove person to fresh air and keep comfortable for breathing. Get immediate medical advice.
P305+P351+P338+P315 - IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

Supplemental information : Contains a substance authorised only for essential laboratory use.

2.3. Other hazards

Other hazards : Not classified as PBT or vPvB. The substance/mixture has no endocrine disrupting properties.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Refrigerant., Ozone Depleting Substances, Fluorinated greenhouse gases

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Bromomethane (R40 B1)	CAS-No.: 74-83-9 EC-No.: 200-813-2 EC Index-No.: 602-002-00-2	100	Flam. Gas 2, H221 Press. Gas (Liq.), H280 Acute Tox. 3 (Oral), H301 (ATE=104 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 2 (Inhalation:gas), H330 (ATE=425 ppmv/4h) STOT SE 3, H335 Muta. 2, H341 STOT RE 2, H373 Aquatic Acute 1, H400 Ozone 1, H420

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

Contains no other components or impurities which will influence the classification of the product.

**1: Listed in Annex IV / V REACH, exempted from registration.*

**3: Registration not required: Substance manufactured or imported < 1t/y.*

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.

First-aid measures after skin contact : Remove contaminated clothing. Drench affected area with water for at least 15 minutes.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

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

Most important symptoms and effects, both acute and delayed

May act principally on the central nervous system, with death resulting from respiratory paralysis.
Prolonged exposure to small concentrations may result in pulmonary oedema.
May cause stomach cramps and vomiting.
Delayed adverse effects possible.
May cause irritation to cornea (with temporary disturbance to vision).
May cause irritation to skin.
May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
See section 11.

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

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Dry powder. Carbon dioxide. Shutting off the source of the gas is the preferred method of control. Water spray or fog. Be aware of the risk of formation of static electricity with the use of CO2 extinguishers. Do not use them in places where a flammable atmosphere may be present.
Unsuitable extinguishing media	:	Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Reactivity in case of fire	:	No reactivity hazard other than the effects described in sub-sections below.
Specific hazards	:	Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products	:	Carbon monoxide. Hydrogen bromide. Carbonyl bromide.

5.3. Advice for firefighters

Specific methods	:	Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire. Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.
Special protective equipment for fire fighters	:	Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. Standard EN 943-2: Protective clothing against liquid and gaseous chemicals, aerosols and solid particles. Gas-tight chemical protective suits for emergency teams. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	:	Act in accordance with local emergency plan. Try to stop release. Evacuate area. Eliminate ignition sources. Ensure adequate air ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Stay upwind. See section 8 of the SDS for more information on personal protective equipment.

6.1.2. For emergency responders

Emergency procedures	:	Monitor concentration of released product. Consider the risk of potentially explosive atmospheres. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. See section 5.3 of the SDS for more information.

6.2. Environmental precautions

Try to stop release. Reduce vapour with fog or fine water spray.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

6.3. Methods and material for containment and cleaning up

Methods and material for containment and cleaning up : Hose down area with water.
Wash contaminated equipment or sites of leaks with copious quantities of water.

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe use of the product : Avoid contact with aluminium.
Assess the risk of potentially explosive atmospheres and the need for explosion-proof equipment.
Purge air from system before introducing gas.
Take precautionary measures against static discharge.
Keep away from ignition sources (including static discharges).
Consider the use of only non-sparking tools.
Ensure equipment is adequately earthed.
Avoid exposure, obtain special instructions before use.
Installation of a cross purge assembly between the container and the regulator is recommended.
The product must be handled in accordance with good industrial hygiene and safety procedures.
Only experienced and properly instructed persons should handle gases under pressure.
Consider pressure relief device(s) in gas installations.
Ensure the complete gas system was (or is regularily) checked for leaks before use.
Do not smoke while handling product.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Avoid suck back of water, acid and alkalis.
Do not breathe gas.
Avoid release of product into work area.

Safe handling of the gas receptacle : Refer to supplier's container handling instructions.
Do not allow backfeed into the container.
Protect containers from physical damage; do not drag, roll, slide or drop.
When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.
Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.
If user experiences any difficulty operating valve discontinue use and contact supplier.
Never attempt to repair or modify container valves or safety relief devices.
Damaged valves should be reported immediately to the supplier.
Keep container valve outlets clean and free from contaminants particularly oil and water.
Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.
Close container valve after each use and when empty, even if still connected to equipment.
Never attempt to transfer gases from one cylinder/container to another.
Never use direct flame or electrical heating devices to raise the pressure of a container.
Do not remove or deface labels provided by the supplier for the identification of the content of the container.
Suck back of water into the container must be prevented.
Open valve slowly to avoid pressure shock.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

7.2. Conditions for safe storage, including any incompatibilities

Conditions for safe storage, including any incompatibilities : Segregate from oxidant gases and other oxidants in store.
All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.
Observe all regulations and local requirements regarding storage of containers.
Containers should not be stored in conditions likely to encourage corrosion.
Container valve guards or caps should be in place.
Containers should be stored in the vertical position and properly secured to prevent them from falling over.
Stored containers should be periodically checked for general condition and leakage.
Keep container below 50°C in a well ventilated place.
Store containers in location free from fire risk and away from sources of heat and ignition.
Keep away from combustible materials.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Bromomethane (R40 B1) (74-83-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Methyl bromide
Remark	Skin. A health-based Occupational Exposure Limit cannot be derived. Based on the LOAEL for local inflammation in the upper airways (v.s.), the exposure, in any case, should be kept well below 1 ppm, and appropriate protective measures should minimise both dermal and inhalational contact. (Year of adoption 2004)
Regulatory reference	SCOEL Recommendations
Austria - Occupational Exposure Limits	
Local name	Brommethan (Methylbromid) (R 40 B1)
Remark	H. Krebserzeugend: III B
Regulatory reference	BGBl. II Nr. 156/2021

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Bromomethane (R40 B1) (74-83-9)	
DNEL/DMEL (additional information)	
Additional information	None available.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Bromomethane (R40 B1) (74-83-9)	
PNEC (additional information)	
Additional information	None available.

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Substance registered as transported isolated intermediate according to REACH article 18(4). Strictly controlled conditions to be applied. Provide adequate general and local exhaust ventilation. Consider the use of a work permit system e.g. for maintenance activities. Product to be handled in a closed system and under strictly controlled conditions. Preferably use permanent leak-tight installations (e.g. welded pipes). Gas detectors should be used when toxic gases may be released. Systems under pressure should be regularly checked for leakages. Ensure exposure is below occupational exposure limits (where available).

8.2.2. Personal protection equipment

Personal protective equipment:

A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered: PPE compliant to the recommended EN/ISO standards should be selected.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:

Wear goggles and a face shield when transfilling or breaking transfer connections.
Provide readily accessible eye wash stations and safety showers.
Standard EN 166 - Personal eye-protection - specifications

8.2.2.2. Skin protection

Hand protection:

Wear working gloves when handling gas containers.
Wear chemically resistant protective gloves.
Standard EN 374 - Protective gloves against chemicals.
Standard EN 388 - Protective gloves against mechanical risks, performance level 1 or higher.
Fluoroelastomer (Viton®) (FKM)

Other skin protection

Keep suitable chemically resistant protective clothing readily available for emergency use.
Standard EN943-1 - Full protective suits against liquid, solid and gaseous chemicals.
Wear safety shoes while handling containers.
Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

Other information:

Keep suitable chemically resistant protective clothing readily available for emergency use.
Standard EN943-1 - Full protective suits against liquid, solid and gaseous chemicals.
Wear safety shoes while handling containers.
Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

8.2.2.3. Respiratory protection

Respiratory protection:

Recommended: Filter AX (brown).

Keep self contained breathing apparatus readily available for emergency use.

Self contained breathing apparatus is recommended, where unknown exposure may be expected, e.g. during maintenance activities on installation systems.

Gas filters may be used if all surrounding conditions e.g. type and concentration of the contaminant(s) and duration of use are known.

Use gas filters with full face mask, where exposure limits may be exceeded for a short-term period, e.g. connecting or disconnecting containers.

Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

Gas filters do not protect against oxygen deficiency.

Standard EN 14387 - Gas filter(s), combined filter(s) and standard EN136, full face masks .

8.2.2.4. Thermal hazards

Thermal hazard protection:

None in addition to the above sections.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance		
Physical state	:	Gas
Colour	:	Colourless.
Form	:	Liquefied gas
Odour	:	Sweetish. Poor warning properties at low concentrations.
Odour threshold	:	Odour threshold is subjective and inadequate to warn of overexposure.
Melting point	:	-93.6 °C
Freezing point	:	Not applicable
Boiling point	:	4 °C
Flammability	:	Flammable gas.
Oxidising properties	:	No oxidising properties.
Explosive limits	:	Not known.
Lower explosion limit	:	8.6 vol %
Upper explosion limit	:	20 vol %
Flash point	:	Not applicable for gases and gas mixtures.
Auto-ignition temperature	:	535 °C
Decomposition temperature	:	Not applicable.
pH	:	If dissolved in water pH-value will be affected.
Viscosity, kinematic	:	Not applicable for gases and gas mixtures.
Viscosity, dynamic	:	0.397 mPa·s literature; Not applicable for gases and gas mixtures.
Solubility in water	:	17250 mg/l
Partition coefficient n-octanol/water (Log Kow)	:	1.19
Partition coefficient n-octanol/water (Log Pow)	:	Not applicable for gas mixtures.
Vapour pressure	:	1.9 bar(a)
Vapour pressure at 50°C	:	4.5 bar(a)
Critical pressure	:	6610 kPa
Density	:	1.677 g/cm³ 20.0 °C
Relative density	:	1.7
Relative vapour density at 20°C	:	Not applicable.
Relative gas density	:	3.1

Particle characteristics : Not applicable
Not applicable for gases and gas mixtures.
Nanoforms are not relevant for gases and gas mixtures.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Tci : 13.9 %
Critical temperature : 194 °C

9.2.2. Other safety characteristics

Molecular mass : 95 g/mol
Gas group : Press. Gas (Liq.)
Additional information : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No reactivity hazard other than the effects described in sub-sections below. Can form explosive mixture with air. May react violently with oxidants.

10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid moisture in installation systems.

10.5. Incompatible materials

May react with bases, copper, silver, mercury, magnesium, zinc and their alloys. May react with aluminium. Reacts with water to form corrosive acids. May react violently with alkalis. Air, Oxidisers. For additional information on compatibility refer to ISO 11114.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity : Fatal intoxication possible with low concentrations.
Fatal if inhaled.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Fatal if inhaled.

Bromomethane (R40 B1) (74-83-9)	
LD50 oral rat	104 mg/kg 1 = reliable without restrictions; Experimental result, Key study; GLP: No
LD50 dermal rat	135 (≤) mg/kg 1 = reliable without restrictions Experimental result, Key study

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Bromomethane (R40 B1) (74-83-9)	
LC50 Inhalation - Rat [ppm]	425 ppm/4h

Skin corrosion/irritation : Causes skin irritation.
pH: If dissolved in water pH-value will be affected.

Bromomethane (R40 B1) (74-83-9)	
Additional information	: (Reported Symptoms/effects after eye contact, Skin contact)

Serious eye damage/irritation : Causes serious eye irritation.
pH: If dissolved in water pH-value will be affected.

Bromomethane (R40 B1) (74-83-9)	
Additional information	: (Reported Symptoms/effects after eye contact, Skin contact)

Respiratory or skin sensitisation : No known effects from this product.

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : No known effects from this product.

Reproductive toxicity : Not classified

Toxic for reproduction : Fertility : No known effects from this product.

Toxic for reproduction : unborn child : No known effects from this product.

STOT-single exposure : Irritation to the respiratory tract. May cause respiratory irritation.

Target organ(s) : Respiratory tract.

Bromomethane (R40 B1) (74-83-9)	
NOAEC (inhalation, rat, gas)	<
NOAEL (acute, oral, animal/male)	< mg/kg bodyweight

STOT-repeated exposure : Damage to kidneys and liver. May cause damage to organs through prolonged or repeated exposure.

Target organ(s) : Central nervous system.
muscle.

Bromomethane (R40 B1) (74-83-9)	
LOAEC (inhalation, rat, gas, 90 days)	≥
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≥ mg/l/6h/day
Additional information	: (NOEL, mouse, 39 mg/kg bw, Inhalation 90 days, 2 = reliable with restrictions, Experimental result, Supporting study). : (NOEL, rat, 2 mg/kg bw, oral 90 days). : (Effect on: eyes, respiratory system, Skin)

Aspiration hazard : Not applicable for gases and gas mixtures.

Bromomethane (R40 B1) (74-83-9)	
Viscosity, kinematic	Not applicable for gases and gas mixtures.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Other information : The substance/mixture has no endocrine disrupting properties.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 12: Ecological information

12.1. Toxicity

Assessment : Very toxic to aquatic life.
Hazardous to the aquatic environment, short–term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long–term (chronic) : Not classified
Not rapidly degradable

Bromomethane (R40 B1) (74-83-9)	
LC50 96 h - Fish [mg/l]	No data available.
EC50 48h - Daphnia magna [mg/l]	No data available.
EC50 72h - Algae [mg/l]	No data available.

12.2. Persistence and degradability

Bromomethane (R40 B1) (74-83-9)	
Assessment	No data available.

12.3. Bioaccumulative potential

Bromomethane (R40 B1) (74-83-9)	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for gas mixtures.
Partition coefficient n-octanol/water (Log Kow)	1.19
Assessment	No data available.

12.4. Mobility in soil

Bromomethane (R40 B1) (74-83-9)	
Assessment	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

12.5. Results of PBT and vPvB assessment

Assessment : Not classified as PBT or vPvB.

12.6. Endocrine disrupting properties

Other adverse effects : May cause pH changes in aqueous ecological systems.
Assessment : The substance/mixture has no endocrine disrupting properties.

12.7. Other adverse effects

Other adverse effects : May cause pH changes in aqueous ecological systems.

Effect on the ozone layer : Harms public health and the environment by destroying ozone in the upper atmosphere.
CFC group : VI.
Ozone depletion potential [R11=1] : 0.6
Global warming potential [CO2=1] : 5

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Effect on global warming : When discharged in large quantities may contribute to the greenhouse effect. Contains greenhouse gas(es).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Contact supplier if guidance is required. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Ensure that the emission levels from local regulations or operating permits are not exceeded. Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at http://www.eiga.eu for more guidance on suitable disposal methods. Must not be discharged to atmosphere. Return unused product in original container to supplier.

List of hazardous waste codes (from Commission Decision 2000/532/EC as amended) : 16 05 04 *: Gases in pressure containers (including halons) containing hazardous substances.

13.2. Additional information

External treatment and disposal of waste should comply with applicable local and/or national regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1062	UN 1062	UN 1062	UN 1062	UN 1062
14.2. UN proper shipping name				
METHYL BROMIDE	METHYL BROMIDE	Methyl bromide	METHYL BROMIDE	METHYL BROMIDE
Transport document description				
UN 1062 METHYL BROMIDE, 2.3, (C/D), ENVIRONMENTALLY HAZARDOUS	UN 1062 METHYL BROMIDE, 2.3, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1062 Methyl bromide, 2.3, ENVIRONMENTALLY HAZARDOUS	UN 1062 METHYL BROMIDE, 2.3, ENVIRONMENTALLY HAZARDOUS	UN 1062 METHYL BROMIDE, 2.3, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
2.3	2.3	2.3	2.3	2.3
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

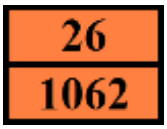
ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment, Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency, Before transporting product containers: - Ensure there is adequate ventilation, - Ensure that containers are firmly secured, - Ensure valve is closed and not leaking, - Ensure valve outlet cap nut or plug (where provided) is correctly fitted, - Ensure valve protection device (where provided) is correctly fitted.

Overland transport

Classification code (ADR) : 2T
Special provisions (ADR) : 23
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P200
Mixed packing provisions (ADR) : MP9
Portable tank and bulk container instructions (ADR) : (M), T50
Tank code (ADR) : PxBH(M)
Tank special provisions (ADR) : TA4, TT9
Vehicle for tank carriage : AT
Transport category (ADR) : 1
Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36
Special provisions for carriage - Operation (ADR) : S14
Hazard identification number (Kemler No.) : 26
Orange plates :



Tunnel restriction code (ADR) : C/D

Transport by sea

Special provisions (IMDG) : 23
Limited quantities (IMDG) : 0
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P200
Tank instructions (IMDG) : T50
EmS-No. (Fire) : F-C
EmS-No. (Spillage) : S-U
Stowage category (IMDG) : D
Stowage and handling (IMDG) : SW2
Properties and observations (IMDG) : Liquefied, toxic gas with a chloroform-like odour. Much heavier than air (3.3). Boiling point: 4.5°C. Even though this substance has a flammability hazard, it only exhibits such hazard under extreme fire conditions in confined areas.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	FORBIDDEN
PCA limited quantity max net quantity (IATA)	:	FORBIDDEN
PCA packing instructions (IATA)	:	FORBIDDEN
PCA max net quantity (IATA)	:	FORBIDDEN
CAO packing instructions (IATA)	:	FORBIDDEN
CAO max net quantity (IATA)	:	FORBIDDEN
Special provisions (IATA)	:	A2
ERG code (IATA)	:	2P

Inland waterway transport

Classification code (ADN)	:	2T
Special provisions (ADN)	:	23
Limited quantities (ADN)	:	0
Excepted quantities (ADN)	:	E0
Equipment required (ADN)	:	PP, EP, TOX, A
Ventilation (ADN)	:	VE02
Number of blue cones/lights (ADN)	:	2

Rail transport

Classification code (RID)	:	2T
Special provisions (RID)	:	23
Limited quantities (RID)	:	0
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P200
Mixed packing provisions (RID)	:	MP9
Portable tank and bulk container instructions (RID)	:	T50(M)
Tank codes for RID tanks (RID)	:	PxBH(M)
Special provisions for RID tanks (RID)	:	TU38, TE22, TE25, TA4, TT9, TM6
Transport category (RID)	:	1
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW9, CW10, CW36
Hazard identification number (RID)	:	26

14.7. Maritime transport in bulk according to IMO instruments

IBC code : Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Other information, restriction and prohibition regulations : (EC) No 1005/2009 : on substances that deplete the ozone layer.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
40.	Bromomethane (R40 B1)	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.

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Listed on the PIC list (Regulation EU 649/2012): Methyl bromide

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Listed on the Ozone Depletion list (Regulation EU 1005/2009): Bromomethane

VOC Directive (2004/42)

Restrictions on use : Authorised only to satisfy essential laboratory and analytical uses as per Commission Decision 2010/375 of 18 June 2010.
Use of the product may be subject to registration and authorisation (Regulation (EC) No 1005/2009).

Seveso Directive (Disaster Risk Reduction)

Seveso Directive : 2012/18/EU (Seveso III) : Covered.

Seveso III Part II (Named dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	**Upper-tier**
Liquefied flammable gases, Category 1 or 2 (including LPG) and natural gas	50	200

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Ensure all national/local regulations are observed.
Safety data sheet in accordance with commission regulation (EU) No 2020/878.
Council Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work
Directive 2016/425/EEC on personal protective equipment
Directive 2014/34/EU on equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)
Only products that comply with the food regulations (EC) No. 1333/2008 and (EU) No. 231/2012 and are labelled as such may be used as food additives.
This Safety Data Sheet has been produced to comply with Regulation (EU) 2015/830.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Austria

Poison Ordinance 2000 : Subject to the Poisons Ordinance 2000

15.2. Chemical safety assessment

A CSA has not yet been carried out.

SECTION 16: Other information

Indication of changes:

Safety data sheet in accordance with commission regulation (EU) No 2020/878.

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
	ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
	ATE - Acute Toxicity Estimate
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAO	Cargo Aircraft only / Cargo Aircraft only
CAS-No.	Chemical Abstract Service number
	CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
	CSA - Chemical Safety Assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC	European Inventory of Existing Commercial Chemical Substances
ED	Endocrine disrupting properties
	EINECS - European Inventory of Existing Commercial Chemical Substances
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PCA	Passenger and Cargo Aircraft / Passenger and Cargo Aircraft
PNEC	Predicted No-Effect Concentration
	PPE - Personal Protection Equipment
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
	RMM - Risk Management Measures
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TRGS	Technical Rules for Hazardous Substances
STOT-RE	Specific Target Organ Toxicity-Repeated Exposure
STOT-SE	Specific Target Organ Toxicity-Single Exposure
UFI	Unique Formula Identifier
	UN - United Nations
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Training advice : Ensure operators understand the flammability hazard. Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard.

Other information : Classification in accordance with the procedures and calculation methods of Regulation (EC) 1272/2008 (CLP). Key literature references and sources of data are maintained in EIGA doc 169 : 'Classification and Labelling Guide', downloadable at http://www.Eiga.eu .

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 2	Flammable gases, Category 2
H221	Flammable gas.

Bromomethane (R40 B1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H420	Harms public health and the environment by destroying ozone in the upper atmosphere
Muta. 2	Germ cell mutagenicity, Category 2
Ozone 1	Hazardous to the ozone layer – category 1
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

DISCLAIMER OF LIABILITY : Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.
Details given in this document are believed to be correct at the time of going to press.
Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

Safety Data Sheet (SDS), EU AT

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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