

# Safety data sheet

According to 1907/2006/EC, Article 31

Revision: Not Applicable

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

### · 1.1 Product identifier

· **Product name:** N-Propyl Bromide

· **Part number:** DRE-C10759500

· **CAS Number:**

106-94-5

· **EC number:**

203-445-0

· **Index number:**

602-019-00-5

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

No further relevant information available.

· **Application of the substance / the mixture** Reference material for laboratory use only

### · 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

Will be updated as per company.

**1.4 Emergency telephone number:** Will be updated as per company.

## SECTION 2: Hazards identification

### · 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225

Highly flammable liquid and vapour.



GHS08 health hazard

Repr. 1B

H360FD

May damage fertility. May damage the unborn child.

STOT RE 2 H373

May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315

Causes skin irritation.

Eye Irrit. 2 H319

Causes serious eye irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

### · 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

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# Safety data sheet

## According to 1907/2006/EC, Article 31

Revision: Not Applicable

**Product name: 1-Bromopropane**

(Contd. from page 1)

**· Hazard pictograms**


GHS02    GHS07    GHS08

**· Signal word** *Danger*
**· Hazard statements**

- H225      *Highly flammable liquid and vapour.*  
 H315      *Causes skin irritation.*  
 H319      *Causes serious eye irritation.*  
 H360FD    *May damage fertility. May damage the unborn child.*  
 H335-H336 *May cause respiratory irritation. May cause drowsiness or dizziness.*  
 H373      *May cause damage to organs through prolonged or repeated exposure.*

**· Precautionary statements**

- P210      *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*  
 P280      *Wear protective gloves/protective clothing/eye protection/face protection.*  
 P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*  
 P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
 P405      *Store locked up.*  
 P501      *Dispose of contents/container in accordance with local/regional/national/international regulations.*

**· Additional information:**
*Restricted to professional users.*
**· 2.3 Other hazards**
**· Results of PBT and vPvB assessment**
**· PBT:** Not applicable.

**· vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

**· 3.1 Chemical characterisation: Substances**
**· CAS No. Description**

106-94-5 1-bromopropane

**· Identification number(s)** *None*
**· EC number:** 203-445-0

**· Index number:** 602-019-00-5

**· RTECS:** TX 4110000

**· Additional information:** *For the wording of the listed hazard phrases refer to section 16.*
**· SVHC**

106-94-5 1-bromopropane

### SECTION 4: First aid measures

**· 4.1 Description of first aid measures**
**· General information:**
*Immediately remove any clothing soiled by the product.*
*Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.*

(Contd. on page 3)

(Contd. from page 2)

- **After inhalation:**  
*Seek medical treatment in case of complaints.*  
*Take affected persons into fresh air and keep quiet.*
- **After skin contact:**  
*Immediately wash with water and soap and rinse thoroughly.*  
*If skin irritation continues, consult a doctor.*
- **After eye contact:**  
*Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.*
- **After swallowing:** *Rinse mouth. Do not induce vomiting.*
- **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
- **4.3 Indication of any immediate medical attention and special treatment needed**  
*No further relevant information available.*

## **SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
*CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*
- **For safety reasons unsuitable extinguishing agents:** *Water with full jet*
- **5.2 Special hazards arising from the substance or mixture**  
*During heating or in case of fire poisonous gases are produced.*
- **5.3 Advice for firefighters**
- **Protective equipment:**  
*Mouth respiratory protective device.*  
*Wear self-contained respiratory protective device.*

## **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
*Mount respiratory protective device.*  
*Wear protective equipment. Keep unprotected persons away.*
- **6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **6.3 Methods and material for containment and cleaning up:**  
*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*  
*Dispose of contaminated material as waste according to item 13.*  
*Ensure adequate ventilation.*
- **6.4 Reference to other sections**  
*See Section 7 for information on safe handling.*  
*See Section 8 for information on personal protection equipment.*  
*See Section 13 for disposal information.*

## **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
*Ensure good ventilation/extraction at the workplace.*  
*Store in cool, dry place in tightly closed receptacles.*  
*Open and handle receptacle with care.*  
*Prevent formation of aerosols.*
- **Information about fire - and explosion protection:**  
*Keep ignition sources away - Do not smoke. Protect against electrostatic charges.*  
*Keep respiratory protective device available.*

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage#:**
- **Requirements to be met by storerooms and receptacles:**  
Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.  
Store only in the original receptacle.  
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** Lists used were valid at the time of SDS preparation.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves** Fluorocarbon rubber (Viton)
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Liquid
Colour:	Colourless
Odour:	Sweetish
Odour threshold:	Not determined.

pH-value:	Not determined.
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#### · Change in condition

Melting point/freezing point: -110 °C

Initial boiling point and boiling range: 71 °C

Flash point:	-1 °C
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Flammability (solid, gas):	Not determined.
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Ignition temperature:	490 °C
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Decomposition temperature:	Not determined.
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Auto-ignition temperature:	Not determined.
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Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
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#### · Explosion limits:

Lower: 3.4 Vol %

Upper: 9.1 Vol %

Vapour pressure at 20 °C:	140 hPa
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Density at 20 °C:	1.35 g/cm <sup>3</sup>
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Relative density	Not determined.
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Vapour density	Not determined.
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Evaporation rate	Not determined.
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#### · Solubility in / Miscibility with water at 20 °C:

2.5 g/l

Partition coefficient: n-octanol/water:	2.1 logP
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#### · Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

9.2 Other information	No further relevant information available.
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## SECTION 10: Stability and reactivity

· 10.1 Reactivity Stable under normal conditions.

· 10.2 Chemical stability Stable under normal conditions.

#### · Thermal decomposition / conditions to be avoided:

Formation of toxic gases is possible during heating or in case of fire.

· 10.3 Possibility of hazardous reactions No dangerous reactions known.

#### · 10.4 Conditions to avoid

Sources of ignition

Heat.

· 10.5 Incompatible materials: Strong oxidizing agents.

· **10.6 Hazardous decomposition products:**

Formation of toxic gases is possible during heating or in case of fire.

## SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

Oral (LD50)	3600 mg/kg (rat)
LD 50 (Intraperitoneal)	2950 mg/kg (rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation**

Causes skin irritation.

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

Repr. 1B

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity**

May damage fertility. May damage the unborn child.

· **STOT-single exposure**

May cause respiratory irritation. May cause drowsiness or dizziness.

· **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

EC50/48 h	99.3 mg/l (daphnia)
LC50/96 h	67.3 mg/l (fish)

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**  
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packaging:**
- **Recommendation:** Dispose of in accordance with national regulations.

### SECTION 14: Transport information

· <b>14.1 UN-Number</b>	UN2344
· <b>ADR, IMDG, IATA</b>	2344 BROMOPROPANES
· <b>ADR</b>	BROMOPROPANES
· <b>IMDG, IATA</b>	
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Warning: Flammable liquids.
· <b>Danger code (Kemler):</b>	33
· <b>EMS Number:</b>	F-E,S-D
· <b>Segregation groups</b>	Liquid halogenated hydrocarbons
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D/E
· <b>UN "Model Regulation":</b>	UN2344, BROMOPROPANES, 3, II



## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Philippines Inventory of Chemicals and Chemical Substances** Substance is listed.
- **Australian Inventory of Chemical Substances** Substance is listed.
- **Standard for the Uniform Scheduling of Medicines and Poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 30, 40
- **National regulations:**
- **Additional classification according to Decree on Hazardous Materials, Annex II:**  
Carcinogenic hazardous material group I (extremely dangerous).  
Carcinogenic hazardous material group II (very dangerous).  
Carcinogenic hazardous material group III (dangerous).
- **Information about limitation of use:**  
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**
- 106-94-5 | 1-bromopropane
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. Company makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Repr. 1B: Reproductive toxicity – Category 1B  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2



· **Sources**

*Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.*

· **Data compared to the previous version altered.** All sections have been updated.

**Disclaimer**

**The Final Document will be available at the time of consignment.**

**# Can vary as per company.**

**End of Safety Data Sheet.**

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