



SAFETY DATA SHEET
4-BROMO-1-BUTENE



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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Company Identification:	Georganics Ltd. Koreničova 1 811 03 Bratislava Slovak Republic	Phone Number: +421 33 6403132 Fax Number: +421 33 6403133 E-mail address: georganics@georganics.sk
Emergency Number, Slovakia:	National Toxicological Information Centre Tel: 00421-2-54774166 Mobil: +421 911 166 066	

SECTION 2 - HAZARDS IDENTIFICATION

GHS pictogram:	H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 - May cause respiratory irritation. P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 	
Signal word: Danger	

SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	Assay (%)	EINECS#
5162-44-7	4-Bromo-1-butene	99	225-937-4

SECTION 4 - FIRST AID MEASURES

Eyes:	Rinse opened eye for at least 15 minutes under running water. Get medical aid.
Skin:	Instantly wash with water and soap and rinse thoroughly. Get medical aid.
Ingestion:	Get medical aid. Wash mouth out with water.
Inhalation:	Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If required, provide artificial respiration.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable extinguishing agents	Use carbon dioxide, dry chemical foam. In cause of large fires use water spray or alcohol-resistant as far as possible. Cool containers with large quantities of water. Solid streams of water may be ineffective.
Protective equipment:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin/eyes.
Unusual fire hazards:	Irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Person-related safety precautions:	Wear protective equipment as indicated in section 8. Ensure adequate ventilation. Keep away from sources of heat (No smoking). Avoid breathing vapors/mist/gas.
Environmental precautions:	Should not be released into the environment.
Additional information:	See Section 7 for information on safe handling. See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

SECTION 7 - HANDLING AND STORAGE

Handling:	Wash thoroughly after handling. Keep away from sources of heat (No smoking). Avoid ingestion and inhalation.
Storage:	Store in a dry, cool and well ventilated place. Keep container closed when not in use. Keep away from heat/sparks/open flames/hot surfaces. See Section 10 for stability and reactivity information.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels. Safety shower and eye bath.
Personal Protective Equipment	
Eyes:	Wear chemical safety glasses.
Skin:	Wear appropriate protective gloves and clothing to prevent skin exposure.
Clothing:	Wear appropriate protective work clothing.
Respirators:	Use breathing protection with high concentrations.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid	Specific Gravity/Density:	Not available
Color:	Clear colorless / yellowish	Refractive Index:	Not available
Boiling Point:	98 - 100 °C	Molecular Formula:	C ₄ H ₇ Br
Freezing/Melting Point:	Not available	Molecular Weight:	135,01
Flash Point:	1 °C		

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal temperatures and pressures.
Incompatible Materials:	Strong oxidants, strong bases
Conditions to avoid:	Incompatible products, heat, sparks, open flames, hot surfaces
Hazardous Decomposition Products:	Carbon oxides, hydrogen bromide

SECTION 11 - TOXICOLOGICAL INFORMATION

Carcinogenicity:	There are no known carcinogenic chemicals in this product. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Potential Health Effects:	Inhalation may cause respiratory irritation. May be harmful if inhaled, swallowed or absorbed through skin.
Other:	The toxicological properties have not been fully investigated.

SECTION 12 - ECOLOGICAL INFORMATION

Do not let product enter drains.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

	IATA	IMDG/IMO	RID/ADR
Shipping Name:	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
Hazard Class:	3	3	3
UN Number:	1993	1993	1993
Packing Group:	II	II	II

SECTION 15 - REGULATORY INFORMATION**European/International Regulations**

European Labeling in Accordance with EC Directives	
Hazard Symbols:	F - Highly flammable
Risk Phrases:	R11 - Highly flammable. R36/37 - Irritating to eyes and respiratory system. R42/43 - May cause sensitization by inhalation and skin contact.
Safety Phrases:	S 16 - Keep away from sources of ignition – No smoking. S 26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. S 45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Canadian DSL/NDSL	CAS# 5162-44-7 is listed on Canada's DSL or NDSL List.
US Federal TSCA	CAS# 5162-44-7 is listed on the TSCA Inventory.

SECTION 16 - OTHER INFORMATION**WARRANTY**

The information contained in the SDS are compiled according to the present knowledge of the manufacturer. It does not represent any guarantee of the properties of the product. SDS shall be used only as a guide. Georganics Ltd. is not liable for damages incurred in the handling or contact with chemicals.