SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Issue date: 16-June 2018

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

1.1 Product identifiers

Product name: N-BUTYL MAGNESIUM BROMIDE 1M IN THF

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

Identified uses: Reagents

1.3 Details of the supplier of the safety data sheet

Supplier:

S D FINE-CHEM LIMITED
315-317, T.V. IND. ESTATE,
248, WORLI ROAD,
MUMBAI-400030, INDIA
TEL: 91-22-24959898
technical@sdfine.com

1.4 Emergency telephone number: +91-22-24959899

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

PHYSICAL HAZARDS	
Flammable liquids	Category 2
Substances and mixtures which, in contact with water, emit flammable gases	Category 1
HEALTH HAZARDS	
Acute toxicity (Oral)	Category 4
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity - Single exposure [Category 2]	Nervous system
Specific target organ toxicity - Single exposure [Category 3]	Respiratory tract irritation
Specific target organ toxicity - Repeated exposure [Category 1]	Liver, Nervous system, Kidney
ENVIRONMENTAL HAZARDS	Not classified

2.2 Label elements

Pictograms or hazard symbols

Signal word Danger

Hazard statements

H225-Highly flammable liquid and vapour.
H260-In contact with water releases flammable gases which may ignite spontaneously.
H302-Harmful if swallowed.
H314-Causes severe skin burns and eye damage.
H371-May cause damage to organs : Nervous system
H372-Causes damage to organs through prolonged or repeated exposure : Liver Nervous system Kidney
H335-May cause respiratory irritation.

Precautionary statements

SECTION 2: Hazards identification

[Prevention]	P210-Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P223-Keep away from any possible contact with water, because of violent reaction and possible flash fire. P231+P232-Handle under inert gas. Protect from moisture. P233-Keep container tightly closed. P241+P242+P243-Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against ignition by the static discharge and the spark. P260-Do not breathe dust/fume/gas/mist/vapours/spray. P271-Use only outdoors or in a well-ventilated area. P270-Do not eat, drink or smoke when using this product. P264-Wash hands thoroughly after handling. P280-Wear protective gloves/eye protection/face protection.
[Response]	P304+P340-IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P301+P330+P331-IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303+P361+P353-IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P363-Wash contaminated clothing before reuse. P310-Immediately call a POISON CENTER or doctor/physician. P370+P378-In case of fire: Do not use water for extinction.
[Storage]	P402+P404-Store in a dry place. Store in a closed container. P403+P233-Store in a well-ventilated place. Keep container tightly closed. P405-Store locked up.
[Disposal]	P501-Dispose of contents/container through a waste management company authorized by the local government

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components:	Butylmagnesium Bromide (ca. 25% in Tetrahydrofuran, ca. 1mol/L)
Percent:	....
CAS Number:	693-03-8
EC-No:	211-737-4
Chemical Formula:	C_4H_9BrMg

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER or doctor/physician.
Ingestion:	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:	Dry chemical, dry sand.
Unsuitable extinguishing media:	Water

5.2 Special hazards arising from the substance or mixture	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. Carbon monoxide, Carbon dioxide, Hydrogen bromide
5.3 Advice for firefighters	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water but NO direct contact with water. Eliminate all ignition sources if safe to do so. When extinguishing fire, be sure to wear personal protective equipment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

6.2 Environmental precautions

Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up

Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Do not allow contact with water. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. Since there is a possibility of igniting behind when removal of a leakage thing is imperfect, it is careful enough.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid contact with skin, eyes and clothing. May develop pressure. Open carefully.
Keep away from any possible contact with water, because of violent reaction and possible flash fire.
Use well-dried equipment.
Handle under inert gas.
Don't leave used equipment or rag. This product may ignite if it is left stuck on combustibles such as paper, rags, etc.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store under inert gas.
Protect from moisture.
Store locked up. Store away from incompatible materials such as oxidizing agents.
Moisture-sensitive

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No data available
(THF)
ACGIH TLV(TWA):50 ppm (skin)
ACGIH TLV(STEL):100 ppm (skin)
OSHA PEL(TWA):200 ppm

8.2 Exposure controls

Install a closed system or local exhaust. Also install safety shower and eye bath.

Respiratory protection:

Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection:

Impervious gloves.

Eye protection:

Safety goggles. A face-shield, if the situation requires.

Skin and body protection:

Impervious protective clothing. Protective boots, if the situation requires.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state (20°C):	Liquid
Odour:	No data available
pH:	No data available
Melting point/freezing point:	No data available (THF) -108°C
Boiling point/range:	No data available (THF) 65°C
Flash point:	No data available (THF) -15°C
Flammability or explosive limits:	
Lower:	No data available
Upper:	No data available
Relative density:	No data available
Solubility(ies):	
[Water]	No data available
[Other solvents]	No data available
Partition coefficient: n-octanol/water:	No data available (THF) 0.46
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Dynamic Viscosity:	No data available
Kinematic viscosity:	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity No data available

10.2 Chemical stability Stable under proper conditions.

10.3 Possibility of hazardous reactions May spontaneously ignite or release flammable gases when in contact with water.

10.4 Conditions to avoid Spark, Open flame, Static discharge, Moisture

10.5 Incompatible materials Oxidizing agents, Water

10.6 Hazardous decomposition products Carbon monoxide, Carbon dioxide, Hydrogen bromide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Toxicity:

(THF)
orl-rat LD50:1650 mg/kg
ihl-rat LC50:21000 ppm/3H
ipr-rat LD50:2900 mg/kg

Skin corrosion/irritation:

Serious eye damage/irritation:

Germ cell mutagenicity:

(THF)
mmo-esc 1 umol/L (-S9)

Carcinogenicity:

(THF)
ihl-rat TCLo:18900 mg/kg/105W-I

Reproductive toxicity:

***We judged that this product was not classified into Class6.1 Toxic Substance of current edition of IATA Dangerous Goods Regulations(DGR) according to acute toxicity values and/or Quantitative Structure-Activity Relationship(QSAR).**

SECTION 12: Ecological information

12.1 Toxicity

Fish: No data available
Crustacea: No data available
Algae: No data available

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data available

12.4 Mobility in soil

Log Pow: No data available
Soil adsorption (Koc): No data available
Henry's Law constant(PaM^3/mol): No data available

12.5 Results of PBT and vPvB assessment

PBT: Not applicable
vPvB: Not applicable

12.6 Other adverse effects No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. Take precautions against ignition. Observe all federal, state and local regulations when disposing of the substance

SECTION 14: Transport information

14.1 UN number 3399

14.2 UN proper shipping name

ADR/RID Organometallic substance, liquid, water-reactive, flammable
IMDG/IMO Organometallic substance, liquid, water-reactive, flammable
ICAO/IATA Organometallic substance, liquid, water-reactive, flammable

14.3 Transport hazard class(es)

ADR/RID 4.3: Substance which, in contact with water, emit flammable gases.
Subsidiary risk: 3: Flammable liquid.
IMDG/IMO 4.3: Substance which, in contact with water, emit flammable gases.
Subsidiary risk: 3: Flammable liquid.

ICAO/IATA	4.3: Substance which, in contact with water, emit flammable gases.
Subsidiary risk:	3: Flammable liquid.

14.4 Packaging group

ADR/RID	I
IMDG/IMO	I
ICAO/IATA	I

14.5 Environmental hazards

Marine pollutant	-

14.6 Special precautions for user No data available

SECTION 15: Regulatory information

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

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No.1907/2006 Not listed

15.2 Chemical safety assessment A chemical safety assessment has not been carried out.

SECTION 16: Other information

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.