SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Name: Bis(trifluoromethane)sulfonimide Lithium Salt

Product Number: All applicable American Elements product codes, e.g. LI-F3MSIDE-02-P, LI-F3MSIDE-03-P, LI-F3MSIDE-04-P, LI-F3MSIDE-05-P

CAS #: 90076-65-6

Relevant identified uses of the substance: Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
GHS06 Skull and crossbones
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
GHS08 Health hazard
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure. Route of exposure: Oral.
GHS05 Corrosion
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Classification according to Directive 67/548/EEC or Directive 1999/45/EC
T; Toxic
R24/25: Toxic in contact with skin and if swallowed.
C; Corrosive
R34: Causes burns.
Xn; Harmful
R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:
Hazards not otherwise classified
No data available

Label elements
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS05
GHS06
GHS08

Signal word
Danger

Hazard statements
H301+H311 Toxic if swallowed or in contact with skin.
H314 Causes severe skin burns and eye damage.
H373 May cause damage to organs through prolonged or repeated exposure. Route of exposure: Oral.

Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
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.
P361 Take off immediately all contaminated clothing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
D1A - Very toxic material causing immediate and serious toxic effects
D2A - Very toxic material causing other toxic effects
E - Corrosive material

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

HEALTH
FIRE
REACTIVITY
3
1
1

Health (acute effects) = 3
Flammability = 1
Physical Hazard = 1
Other hazards

Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS No. / Substance Name:
90076-65-6 Lithium bis(trifluoromethylsulfonyl)imide
Identification number(s):
ELINCS Number:
415-300-0
Index number:
616-124-00-9

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
If inhaled:
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
In case of skin contact:
Immediately wash with soap and water; rinse thoroughly.
Seek immediate medical advice.
In case of eye contact:
Rinse opened eye for several minutes under running water. Consult a physician.
If swallowed:
Do not induce vomiting; immediately call for medical help.
Information for doctor
Most important symptoms and effects, both acute and delayed
Causes severe skin burns.
Causes serious eye damage.
Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Sulfur oxides (SOx)
Hydrogen fluoride (HF)
Nitrogen oxides (NOx)
Lithium oxide
Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions:
Do not allow material to be released to the environment without official permits.
Do not allow product to enter drains, sewage systems, or other water courses.
Do not allow material to penetrate the ground or soil.
Methods and materials for containment and cleanup:
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.
Prevention of secondary hazards:
No special measures required.
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

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Prevent formation of dust.
Information about protection against explosions and fires:
No data available
Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
Store away from water/moisture.
Store away from oxidizing agents.
Further information about storage conditions:
Store under dry inert gas.
This product is moisture sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
Protect from humidity and water.
Specific end use(s)
No data available
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and
having an average face velocity of at least 100 feet per minute.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values
that should be monitored at the workplace.

Additional information:
No data
Exposure controls
Personal protective equipment
Follow typical protective and hygienic practices for handling chemicals.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment:
Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls.
Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only
use equipment tested and approved under appropriate government standards.

Protection of hands:
Impervious gloves
Inspect gloves prior to use.
Suitability of gloves should be determined both by material and quality, the latter of which may vary by
manufacturer.

Material of gloves
Nitrile rubber, NBR
Penetration time of glove material (in minutes)
480
Glove thickness
0.11 mm

Eye protection:
Tightly sealed goggles
Full face protection

Body protection:
Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance:
Form: Powder
Color: White
Odor: Not determined
Odor threshold: Not determined.
pH: N/A
Melting point/Melting range: 234-238 °C (453-460 °F)
Boiling point/Boiling range: Not determined  
Sublimation temperature / start: Not determined  
Flammability (solid, gas)  
N/A  
Ignition temperature: Not determined  
Decomposition temperature: Not determined  
Autoignition: Not determined.  
Danger of explosion: Product does not present an explosion hazard.  
Explosion limits:  
Lower: Not determined  
Upper: Not determined  
Vapor pressure: N/A  
Density: Not determined  
Relative density  
Not determined.  
Vapor density  
N/A  
Evaporation rate  
N/A  
Solubility in Water (H₂O): Soluble  
Partition coefficient (n-octanol/water): Not determined.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information  
No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available  
Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Reacts with strong oxidizing agents  
Conditions to avoid  
No data available  
Incompatible materials:  
Oxidizing agents  
Water/moisture  
Hazardous decomposition products:  
Carbon monoxide and carbon dioxide  
Lithium oxide  
Nitrogen oxides  
Sulfur oxides (SOx)  
Hydrogen fluoride
SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Toxic in contact with skin.
Toxic if swallowed.
Danger through skin absorption.
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
LD/LC50 values that are relevant for classification:
No data
Skin irritation or corrosion:
Causes severe skin burns.
Eye irritation or corrosion:
Causes serious eye damage.
Sensitization:
No sensitizing effects known.
Germ cell mutagenicity:
No effects known.
Carcinogenicity:
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:
No effects known.
Specific target organ system toxicity - repeated exposure:
May cause damage to organs through prolonged or repeated exposure. Route of exposure: Oral.
Specific target organ is not known.
Specific target organ system toxicity - single exposure:
No effects known.
Aspiration hazard:
No effects known.
Subacute to chronic toxicity:
No effects known.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No data available
Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Ecotoxicological effects:
Remark:
Harmful to aquatic organisms
Additional ecological information:
Do not allow material to be released to the environment without official permits.
Do not allow product to reach groundwater, water courses, or sewage systems, even in small
quantities. Danger to drinking water if even extremely small quantities leak into the ground. May cause long lasting harmful effects to aquatic life. Avoid transfer into the environment. Harmful to aquatic organisms Results of PBT and vPvB assessment
PBT: N/A vPvB: N/A Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Recommendation
Consult official regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.
Recommended cleansing agent:
Water, if necessary with cleansing agents.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN2923
UN proper shipping name
DOT
Corrosive solids, toxic, n.o.s. (Lithium bis(trifluoromethylsulfonyl)imide)
IMDG, IATA
CORROSIVE SOLID, TOXIC, N.O.S. (Lithium bis(trifluoromethylsulfonyl)imide)
Transport hazard class(es)
DOT
Class 8 Corrosive substances.
Label 8+6.1
Class 8 (CT2) Corrosive substances
Label 8+6.1
IMDG, IATA
Class 8 Corrosive substances.
Label 8+6.1
Packing group
DOT, IMDG, IATA
Environmental hazards: N/A
Special precautions for user
Warning: Corrosive substances
EMS Number: F-A,S-B
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A
Transport/Additional information: DOT
Marine Pollutant (DOT): No
UN "Model Regulation":
UN2923, Corrosive solids, toxic, n.o.s. (Lithium bis(trifluoromethylsulfonyl)imide), 8(6.1), II

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings)
Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer
Substance is not listed.
Prop 65 - Developmental toxicity
Substance is not listed.
Prop 65 - Developmental toxicity, female
Substance is not listed.
Prop 65 - Developmental toxicity, male
Substance is not listed.
Information about limitation of use:
For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.
Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use)
Substance is not listed.
REACH - Pre-registered substances
Substance is listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the
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