

Material Safety Data Sheet

Lithium bis(trimethylsilyl)amide, 1.3M solution in THF

ACC# 47884

Section 1 - Chemical Product and Company Identification

MSDS Name: Lithium bis(trimethylsilyl)amide, 1.3M solution in THF

Catalog Numbers: AC413315000

Synonyms: 1,1,1,3,3,3-Hexamethyldisilazane lithium salt.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
109-99-9	Tetrahydrofuran	78.29	203-726-8
4039-32-1	Lithium bis(trimethylsilyl)amide	21.71	223-725-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: not available. Flash Point: -17 deg C.

Danger! Corrosive. Causes eye and skin burns. Uninhibited material, or material from which the inhibitor has been removed or reacted, may form explosive peroxides. **Flammable liquid and vapor.** May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. May form explosive peroxides. Air sensitive.

Target Organs: None.

Potential Health Effects

Eye: Causes eye burns.

Skin: Causes skin burns.

Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.

Inhalation: Causes chemical burns to the respiratory tract. Vapors may cause dizziness or suffocation.

Chronic: None

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Do NOT use water directly on fire. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Flash Point: -17 deg C (1.40 deg F)

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:N/A

Upper: N/A

NFPA Rating: (estimated) Health: 3; Flammability: 4; Instability: 1

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Isolate area and deny entry. Provide ventilation. Place under an inert atmosphere. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. If peroxide formation is suspected, do not open or move container. Avoid contact with air and sunlight. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Unused chemicals should not be returned to the container. Do not distill since this removes peroxide-inhibitors.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Do not store in direct sunlight. Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Regularly check inhibitor levels to maintain peroxide levels below 1%. Do not break the seal on the container until it is needed. Label the container with the date it was first opened. Long-term storage is not recommended.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Tetrahydrofuran	50 ppm TWA; 100 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 590 mg/m ³ TWA 2000 ppm IDLH	200 ppm TWA; 590 mg/m ³ TWA
Lithium bis(trimethylsilyl)amide	none listed	6 mg/m ³ TWA (listed under Silica, amorphous).3000 mg/m ³ IDLH (listed under Silica, amorphous).	none listed

OSHA Vacated PELs: Tetrahydrofuran: 200 ppm TWA; 590 mg/m³ TWA Lithium bis(trimethylsilyl)amide: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: not available

Odor: none reported

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: 5.8

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point:Not available.

Decomposition Temperature:Not available.

Solubility: reacts with water.

Specific Gravity/Density:.8150g/cm³

Molecular Formula:C₆H₁₈LiNSi₂

Molecular Weight:167.2447

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. On long term storage, substances with similar functional groups form explosive peroxides. Explosive peroxides may form on concentration. Peroxides can be detonated by friction, impact, or heating. Tends to form explosive peroxides; especially when anhydrous. Peroxide formation may occur in containers that have been opened and remain in storage.

Conditions to Avoid: Incompatible materials, ignition sources, exposure to air, excess heat, strong oxidants.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen, silicon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 109-99-9: LU5950000

CAS# 4039-32-1 unlisted.

LD50/LC50:

CAS# 109-99-9:

Inhalation, rat: LC50 = 21000 ppm/3H;

Oral, rat: LD50 = 1650 mg/kg;

CAS# 4039-32-1:

Carcinogenicity:

CAS# 109-99-9:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Not listed.

CAS# 4039-32-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. Cas# 109-00-0:LC50(96Hr.) Fathead Minnow = 2160 mg/L

Environmental: Tetrahydrofuran is expected to biodegrade under aerobic conditions but may be resistant to biodegradation in anaerobic environments.

Physical: According to a model of gas/particle partitioning of semivolatile organic compounds in the atmosphere, tetrahydrofuran, which has a vapor pressure of 162 mm Hg at 25 deg C, determined from experimentally-derived coefficients, will exist solely as a vapor in the ambient atmosphere. Vapor-phase tetrahydrofuran is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals and nitrate radicals; the half-lives for these reactions in air are estimated to be about 1 day and 3 days, respectively.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series:

CAS# 109-99-9: waste number U213 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	FLAMMABLE LIQUIDS, CORROSIVE, N.O.S.	No information available.
Hazard Class:	3	
UN Number:	UN2924	
Packing Group:	II	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 109-99-9 is listed on the TSCA inventory.

CAS# 4039-32-1 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

CAS# 109-99-9: Testing required by manufacturers, processors; Test for Health Effects

Section 12b

CAS# 109-99-9: Section 4

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 109-99-9: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 109-99-9: immediate, fire, reactive.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 109-99-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 4039-32-1 can be found on the following state right to know lists: California, (listed as Silica, amorphous), New Jersey, (listed as Silica, amorphous), Pennsylvania, (listed as Silica, amorphous), Minnesota, (listed as Silica, amorphous), Massachusetts, (listed as Silica, amorphous).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

F C

Risk Phrases:

R 11 Highly flammable.
R 19 May form explosive peroxides.
R 34 Causes burns.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.
S 29 Do not empty into drains.
S 33 Take precautionary measures against static discharges.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)

CAS# 109-99-9: 1
CAS# 4039-32-1: No information available.

Canada - DSL/NDSL

CAS# 109-99-9 is listed on Canada's DSL List.
CAS# 4039-32-1 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, E.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 109-99-9 is listed on the Canadian Ingredient Disclosure List.
CAS# 4039-32-1 (listed as Silica, amorphous) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/02/1999

Revision #4 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.