

Material Safety Data Sheet

Lithium bis(trimethylsilyl)amide, 1.3M solution in toluene/ethylbenzene

ACC# 09619

Section 1 - Chemical Product and Company Identification

MSDS Name: Lithium bis(trimethylsilyl)amide, 1.3M solution in toluene/ethylbenzene

Catalog Numbers: AC377480000, AC377481000, AC377488000

Synonyms: 1,1,1,3,3,3-Hexamethyldisilazane, lithium salt, 1.3M solution in toluene/ethylbenzene

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
4039-32-1	Silamine, 1,1,1-trimethyl-N-(trimethylsilyl)-	23-27	223-725-6
108-88-3	Toluene	67	203-625-9
100-41-4	Ethyl benzene	8	202-849-4

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Yellowish brown liquid.

Highly flammable. Corrosive. Water-reactive.

Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns.

Skin: Causes skin burns.

Ingestion: Causes gastrointestinal tract burns.

Inhalation: Causes chemical burns to the respiratory tract.

Chronic: Not available.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

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

Ingestion: Do not induce vomiting. 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.

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. Will burn if involved in a fire. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. Flammable liquid and vapor.

Extinguishing Media: Do NOT use halogenated agents. Do NOT use water, carbon dioxide, or foam. Smother with dry sand, dry clay, dry ground limestone (CaCO₃), or use approved Class D extinguishers.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: Not published.

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. Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water.

Section 7 - Handling and Storage

Handling: Do not allow water to get into the container because of violent reaction. Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not allow contact with water. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container. Flammables-area. Corrosives area. Water free area. Store under nitrogen.

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 explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-	none listed	6 mg/m ³ TWA (listed under Silica, amorphous).3000 mg/m ³ IDLH (listed under Silica, amorphous).	none listed
Toluene	50 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	100 ppm TWA; 375 mg/m ³ TWA 500 ppm IDLH	200 ppm TWA; 300 ppm Ceiling
Ethyl benzene	100 ppm TWA; 125 ppm STEL	100 ppm TWA; 435 mg/m ³ TWA 800 ppm IDLH	100 ppm TWA; 435 mg/m ³ TWA

OSHA Vacated PELs: Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-: No OSHA Vacated PELs are listed for this chemical. Toluene: 100 ppm TWA; 375 mg/m³ TWA Ethyl benzene: 100 ppm TWA; 435 mg/m³ TWA

Personal Protective Equipment

Eyes: Not available.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Yellowish brown

Odor: aromatic odor

pH: >7

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point:Not available.

Decomposition Temperature:Not available.

Solubility: vigorous reaction

Specific Gravity/Density:0.860

Molecular Formula:C₆H₁₈LiNSi₂

Molecular Weight:167.33

Section 10 - Stability and Reactivity

Chemical Stability: Reacts violently with water.

Conditions to Avoid: Incompatible materials, light, ignition sources, exposure to moist air or water.

Incompatibilities with Other Materials: Water, strong oxidizing agents, acids, alcohols, carbon dioxide, violent reaction with halogens, halides.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides (NO_x) and ammonia (NH₃), silicon dioxide, lithium oxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 4039-32-1 unlisted.

CAS# 108-88-3: XS5250000

CAS# 100-41-4: DA0700000

LD50/LC50:

Not available.

CAS# 108-88-3:

Draize test, rabbit, eye: 870 ug Mild;

Draize test, rabbit, eye: 2 mg/24H Severe;

Draize test, rabbit, skin: 435 mg Mild;

Draize test, rabbit, skin: 500 mg Moderate;
 Draize test, rabbit, skin: 20 mg/24H Moderate;
 Inhalation, mouse: LC50 = 400 ppm/24H;
 Inhalation, mouse: LC50 = 30000 mg/m³/2H;
 Inhalation, mouse: LC50 = 19900 mg/m³/7H;
 Inhalation, mouse: LC50 = 10000 mg/m³;
 Inhalation, rat: LC50 = 49 gm/m³/4H;
 Oral, rat: LD50 = 636 mg/kg;
 Skin, rabbit: LD50 = 14100

CAS# 100-41-4:

Draize test, rabbit, eye: 500 mg Severe;
 Inhalation, mouse: LC50 = 35500 mg/m³/2H;
 Inhalation, rat: LC50 = 55000 mg/m³/2H;
 Oral, rat: LD50 = 3500 mg/kg;
 Oral, rat: LD50 = 3500 mg/kg;
 Skin, rabbit: LD50 = 17800 uL/kg;

Carcinogenicity:

CAS# 4039-32-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
 CAS# 108-88-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
 CAS# 100-41-4:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans
- **California:** carcinogen, initial date 6/11/04
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen

Epidemiology: No data available.

Teratogenicity: In an epidemiologic study of toluene and pregnancy, occupational exposures to toluene were said to be associated with an increased incidence of renal, urinary, gastrointestinal, and cardiac anomalies. Fetotoxicity (reduced fetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males) were observed in the offspring of rats exposed by inhalation to toluene, in the absence of maternal toxicity.

Reproductive Effects: Many reports of reproductive effects of toluene abuse or heavy occupational exposure are confounded by mixed solvent exposure or fetal alcohol syndrome. Women exposed to toluene in lab work had a 4.7-fold increased risk of spontaneous abortions.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

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# 108-88-3: waste number U220.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	COMPOUND DISPERSION, WATER-REACTIVE, FLAMMABLE, N.O.S.	No information available.
Hazard Class:	4.3	
UN Number:	UN3207	
Packing Group:	I	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 4039-32-1 is listed on the TSCA inventory.
 CAS# 108-88-3 is listed on the TSCA inventory.
 CAS# 100-41-4 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 108-88-3: Effective 10/4/82, Sunset 10/4/92 CAS# 100-41-4: Effective 6/19/87, Sunset 6/19/97

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

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

CERCLA Hazardous Substances and corresponding RQs

CAS# 108-88-3: 1000 lb final RQ; 454 kg final RQ CAS# 100-41-4: 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 # 108-88-3: immediate, fire.

CAS # 100-41-4: immediate, delayed, fire.

Section 313

This material contains Toluene (CAS# 108-88-3, 67%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Ethyl benzene (CAS# 100-41-4, 8%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 108-88-3 is listed as a hazardous air pollutant (HAP).

CAS# 100-41-4 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 108-88-3 is listed as a Hazardous Substance under the CWA. CAS# 100-41-4 is listed as a Hazardous Substance under the CWA.

CAS# 108-88-3 is listed as a Priority Pollutant under the Clean Water Act. CAS# 100-41-4 is listed as a Priority Pollutant under the Clean Water Act. CAS# 108-88-3 is listed as a Toxic Pollutant under the Clean Water Act. CAS# 100-41-4 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

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

STATE

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).

CAS# 108-88-3 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 100-41-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

WARNING: This product contains Ethyl benzene, a chemical known to the state of California to cause cancer. WARNING: This product contains Toluene, a chemical known to the state of California to cause developmental reproductive toxicity. 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 14 Reacts violently with water.

R 34 Causes burns.

R 20 Harmful by inhalation.

R 63 Possible risk of harm to the unborn child.

R 67 Vapours may cause drowsiness and dizziness.

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).

S 8 Keep container dry.

S 6A Keep under nitrogen.

S 43B In case of fire, use fire-fighting equipment on basis of sodium chloride, sodium bicarbonate (never use water).

WGK (Water Danger/Protection)

CAS# 4039-32-1: No information available.

CAS# 108-88-3: 2

CAS# 100-41-4: 1

Canada - DSL/NDSL

CAS# 108-88-3 is listed on Canada's DSL List.

CAS# 100-41-4 is listed on Canada's DSL List.

CAS# 4039-32-1 is listed on Canada's NDSL List.

Canada - WHMIS

WHMIS: Not available.

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

CAS# 108-88-3 is listed on the Canadian Ingredient Disclosure List.

CAS# 100-41-4 is listed on the Canadian Ingredient Disclosure List.

MSDS Creation Date: 9/20/2004

Revision #0 Date: Original.

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