

Material Safety Data Sheet

Urethane, 99%

ACC# 92322

Section 1 - Chemical Product and Company Identification

MSDS Name: Urethane, 99%

Catalog Numbers: AC140760000, AC140760010, AC140760250, AC140761000, AC140762500

Synonyms: Ethyl carbamate

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
51-79-6	Urethane	99.0	200-123-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless crystalline powder.

Caution! Causes respiratory tract irritation. Causes eye and skin irritation. May be absorbed through intact skin. May cause digestive tract irritation. May be harmful if swallowed. May cause central nervous system depression. Potential cancer hazard. May cause cancer based on animal studies. May cause liver and kidney damage. May cause bone marrow damage.

Target Organs: Kidneys, central nervous system, liver, bone marrow.

Potential Health Effects

Eye: Causes eye irritation. May cause chemical conjunctivitis.

Skin: Causes skin irritation. Substance is readily absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause central nervous system depression. May cause bone marrow depression and possible focal degeneration of the brain.

Inhalation: Causes respiratory tract irritation. Inhalation at high concentrations may cause CNS depression and asphyxiation. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.

Chronic: Possible cancer hazard based on tests with laboratory animals. Large doses cause bone

marrow depression and occasionally focal degeneration in the brain.

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 flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: 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: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Dusts may be combustible when exposed to heat, flame, or oxidizing agents. May be ignited by heat, sparks, and flame. Containers may explode when heated.

Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: Not applicable.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

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

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and 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. Avoid ingestion and inhalation. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or

expose empty containers to heat, sparks or open flames.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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 ventilation to keep airborne concentrations low. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Urethane	none listed	none listed	none listed

OSHA Vacated PELs: Urethane: 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: 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: Crystalline powder

Appearance: colorless

Odor: odorless

pH: Not available.

Vapor Pressure: 10 mm Hg @77.8C

Vapor Density: 3.07

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 182 - 184 deg C @ 760.00mm Hg

Freezing/Melting Point: 48.5 - 50 deg C

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: 1.107

Molecular Formula: C3H7NO2

Molecular Weight: 89.0545

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, strong oxidants.

Incompatibilities with Other Materials: Acids, antipyrine, chloral hydrate, salol, thymol.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 51-79-6: FA8400000

LD50/LC50:

CAS# 51-79-6:

Oral, mouse: LD50 = 2500 mg/kg;

Oral, rat: LD50 = 1809 mg/kg;

Carcinogenicity:

CAS# 51-79-6:

- ACGIH: Not listed.
- California: carcinogen, initial date 1/1/88
- NTP: Suspect carcinogen
- IARC: Group 2B carcinogen

Epidemiology: IARC regards urethane as a possible human carcinogen.

Teratogenicity: Experimental teratogenic effects have been reported

Reproductive Effects: Experimental reproductive effects have been reported.

Mutagenicity: Human mutation data reported

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: When released to soil it is expected to adsorb only weakly and to leach to groundwater. Biodegradation in soil is not expected to be significant. In water it will not adsorb strongly to soil in the bed, and may leach into groundwater. Biodegradation and hydrolysis in the water should be slow. Bioconcentration in aquatic organisms should be negligible. When released into the air, it is expected to wash out by rain and react with photochemically generated hydroxyl radicals (estimated half-life 22.31 days). Genium's

Physical: No information available.

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# 51-79-6: waste number U238.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 51-79-6 is listed on the TSCA inventory.

Health & Safety Reporting List

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

Chemical Test Rules

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

Section 12b

CAS# 51-79-6: Section 5

TSCA Significant New Use Rule

CAS# 51-79-6: This product is for research and development use only. It is subject to a SNUR which has specific requirements and restrictions. The specific citation for this product is 40CFR citation 721.9930.

CERCLA Hazardous Substances and corresponding RQs

CAS# 51-79-6: 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

This material contains Urethane (CAS# 51-79-6, 99.0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 51-79-6 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:

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# 51-79-6 can be found on the following state right to know lists: California, New Jersey,

Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Urethane, a chemical known to the state of California to cause cancer. WARNING: This product contains Urethane, a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: CAS# 51-79-6: 0.7 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 45 May cause cancer.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.

WGK (Water Danger/Protection)

CAS# 51-79-6: 1

Canada - DSL/NDSL

CAS# 51-79-6 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A, D2B.

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# 51-79-6 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/11/1998

Revision #5 Date: 3/04/2004

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.