

Chemical name	Common name and synonyms	CAS number	%
Siloxanes and Silicones, di-Me, [[[3-[(2-aminoethyl)amino]propyl]di methoxysilyl]oxy]-terminated		71750-80-6	1 - < 3
PROPAN-2-OL		67-63-0	0.8 - < 3
Distillates (petroleum), hydrotreated middle		64742-46-7	5.55

Specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with eyes, skin, and clothing. Do not breathe mist/vapors. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes, skin, and clothing. Do not breathe mist/vapors. Avoid prolonged exposure. Provide adequate ventilation. When using, do not eat, drink or smoke. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Wear appropriate personal protective equipment. For personal protection, see Section 8 of the SDS.
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Conditions for safe storage, including any incompatibilities Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
2-BUTOXYETHANOL (CAS 111-76-2)	PEL	240 mg/m ³	
		50 ppm	
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	PEL	5 mg/m ³	Mist.
PROPAN-2-OL (CAS 67-63-0)	PEL	980 mg/m ³	
		400 ppm	

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
2-BUTOXYETHANOL (CAS 111-76-2)	TWA	20 ppm	
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	TWA	5 mg/m ³	Inhalable fraction.
PROPAN-2-OL (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
2-BUTOXYETHANOL (CAS 111-76-2)	IDLH	1.1 %
		700 ppm
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	IDLH	2500 mg/m ³
PROPAN-2-OL (CAS 67-63-0)	IDLH	2 %
		2000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value	Form
2-BUTOXYETHANOL (CAS 111-76-2)	TWA	24 mg/m ³	
		5 ppm	
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
PROPAN-2-OL (CAS 67-63-0)	STEL	1225 mg/m ³	
		500 ppm	
	TWA	980 mg/m ³	
		400 ppm	

Biological limit values

ACGIH Biological Exposure Indices (BEI)

Components	Value	Determinant	Specimen	Sampling Time
2-BUTOXYETHANOL (CAS 111-76-2)		Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*
PROPAN-2-OL (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-BUTOXYETHANOL (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, appropriate local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Suitable chemical protective gloves should be worn when the potential exists for skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Nitrile gloves are recommended.

Other

Wear appropriate chemical resistant clothing if applicable.

Respiratory protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Aqueous solution.

Color

Grey.

Odor

Slight.

Odor threshold

Not available.

pH

> 4 - < 6

Melting point/freezing point

32 °F (0 °C)

Initial boiling point and boiling range

212 °F (100 °C)

Flash point

>212.0 °F (>100.0 °C) Closed Cup

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits**Explosive limit - lower (%)** Not available.**Explosive limit - upper (%)** Not available.**Vapor pressure** Not available.**Vapor density** Not available.**Relative density** 0.98 (Water=1)**Solubility(ies)****Solubility (water)** Soluble**Partition coefficient (n-octanol/water)** Not available.**Auto-ignition temperature** Not available.**Decomposition temperature** Not available.**Viscosity** Similar to water**Other information****VOC** 4.4**10. Stability and reactivity****Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.**Chemical stability** Material is stable under normal conditions.**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.**Conditions to avoid** Contact with incompatible materials.**Incompatible materials** Strong oxidizing agents.**Hazardous decomposition products** Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.**11. Toxicological information****Information on likely routes of exposure****Inhalation** Based on available data, the classification criteria are not met. Prolonged inhalation may be harmful.**Skin contact** Based on available data, the classification criteria are not met.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

May be irritating to the skin.

Eye contact Based on available data, the classification criteria are not met. Can cause severe eye irritation.**Ingestion** Based on available data, the classification criteria are not met. May be harmful if swallowed.**Symptoms related to the physical, chemical and toxicological characteristics** Can cause severe eye irritation. Mild skin irritation.**Information on toxicological effects****Acute toxicity**

Components	Species	Calculated/Test Results
2-BUTOXYETHANOL (CAS 111-76-2)		
Acute		
Dermal		
LD50	Rabbit	400 mg/kg
Inhalation		
LC50	Mouse	700 ppm, 7 Hours
	Rat	486 ppm, 4 Hours
		450 ppm, 4 Hours

Components	Species	Calculated/Test Results
Oral LD50	Guinea pig	1.2 g/kg
	Mouse	1519 mg/kg
		1.2 g/kg
	Rabbit	0.32 g/kg
	Rat	560 mg/kg
		1.48 g/kg
Other LD50	Mouse	1130 mg/kg
	Rabbit	280 mg/kg
	Rat	550 mg/kg
		340 mg/kg
PROPAN-2-OL (CAS 67-63-0)		
Acute		
Dermal LD50	Rabbit	12800 mg/kg
Oral LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
		4.5 g/kg
	Rabbit	6410 mg/kg
		8 g/kg
		5.03 g/kg
	Rat	5045 mg/kg
		4.7 g/kg
Other LD50	Mouse	4477 mg/kg
		1509 mg/kg
	Rat	2735 mg/kg
		1099 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Can cause severe eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure. Liver. Kidneys. Lymph system. Skin. Blood. Eyes. Central nervous system. Respiratory system. Hematopoietic system.	
Aspiration hazard	Not an aspiration hazard.	

Chronic effects Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-BUTOXYETHANOL	0.83
PROPAN-2-OL	0.05

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

2-BUTOXYETHANOL (CAS 111-76-2)	Listed.
PROPAN-2-OL (CAS 67-63-0)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
PROPAN-2-OL	67-63-0	0.8 - < 3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

International Inventories

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. Other information, including date of preparation or last revision

Issue date	09-08-2023
Version	01
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

Preparation Information and Disclaimer

This document was prepared by FCSD-Toxicology, Ford Motor Company, Diagnostic Service Center II, 1800 Fairlane Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.

Part number(s) ZC-61, ZC-61-A