

Ingredients with biological limit values

Components	Biological limit values	Duration
Methanol (CAS NO# 67-56-1)	15 mg/l (Urine)	Time: end of shift

Appropriate engineering controls	Provide eyewash station and safety shower. Provide adequate ventilation to minimize dust concentrations. Avoid all unnecessary exposure.
Respiratory equipment	Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
Hand protection	Wear chemical-resistant gloves.
Eye protection	Wear safety glasses with side shields (or goggles).
Other protection	Wear suitable protective clothing.
General hygiene considerations	Wear suitable gloves and eye/face protection. . Keep away from food and drink. When using does not eat, drink or smoke. Wash hands before breaks and at the end of work.

9. Physical and chemical properties

Appearance	
Form	Liquid
Color	White
Odor	No information available.
Odor threshold	No information available.
pH	12
Melting point	No information available.
Freezing point	No information available.
Initial boiling point and boiling range	>120°C
Flash point	>70°C Method: Closed Cup
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	No information available.
Flammability limit – upper (%)	No information available.
Explosive limit - lower (%)	No information available.
Explosive limit - upper (%)	No information available.
Vapor pressure	No information available.
Vapor density	No information available.
Relative density	1.08
Solubility(ies)	
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity	No information available.
VOC	15g/L

10. Stability and reactivity

Reactivity	No specific reactivity hazards associated with this product.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	None under recommended storage and handling condition.
Incompatible materials	No information available.
Hazardous decomposition products	No dangerous decomposition products known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	No information available.
Inhalation	No information available.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	No information available.
Delayed and immediate effects and also chronic effects from short- and long-term exposure	No information available.

Numerical measures of toxicity

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Aminoethyl aminopropyl trimethoxy silane (CAS NO# 1760-24-3)	2,995 mg/kg (rat)	> 2,000 mg/kg (rabbit)	No information available
Vinyltrimethoxysilane (CAS NO# 2768-02-7)	7.34 mL/kg (rat)	3,460 - 4,000 mg/kg (rabbit)	2773 ppm, 4h, vapor
Dibutyltin oxide (CAS NO# 818-08-6)	172 mg/kg (rat)	No information available	No information available

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	No information available.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No information available.
Carcinogenicity	Contains polycyclic aromatic compounds (PACs). Prolonged and/or repeated skin contact with certain PACs has been shown to cause skin cancer. Prolonged and/or repeated exposures by inhalation of certain PACs may also cause cancer of the lung and of other sites of the body.
Reproductive toxicity	May damage fertility or the unborn child.
Specific target organ toxicity - single exposure	No information available.
Specific target organ toxicity - repeated exposure	May causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity

Numerical measures of toxicity

Chemical Name	Test	Species	Test Results
Aminoethyl aminopropyl trimethoxy silane (CAS# 1760-24-3)	Fish LC ₅₀	Bluegill (<i>Lepomis macrochirus</i>)	> 100 mg/L
	Crustacean EC ₅₀	Water flea (<i>Daphnia magna</i>)	87.4 mg/L, 48h
	Algae EC ₅₀	Green microalgae (<i>Pseudokirchneriella subcapitata</i>)	8.8 mg/L, 96h
	Algae NOEC	Green microalgae (<i>Pseudokirchneriella subcapitata</i>)	3.1 mg/L
Dibutyltin oxide (CAS# 818-08-6)	Fish LC ₅₀	Generic fish	1 mg/L, 48h
	Crustacean EC ₅₀	Water flea (<i>Daphnia magna</i>)	2 mg/L, 48h
	Algae EC ₅₀	Green algae (<i>Desmodesmus subspicatus</i>)	≥ 1.6 mg/L, 72h

Persistence and degradability

There are no data on the degradability of this product.

Bioaccumulative potential

No data available on bioaccumulation.

Mobility in soil

No data available.

Other adverse effects

Not available.

13. Disposal considerations

Disposal instructions

Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

14. Transport information

	DOT	IMDG	IATA
UN number	Not regulated	Not regulated	Not regulated
UN proper shipping name	Not dangerous goods	Not dangerous goods	Not dangerous goods
Transport hazard class(es)	Not regulated	Not regulated	Not regulated
Packing group	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No
Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes	Not applicable.		
Special Precaution(s)	Not applicable.		

15. Regulatory information

US federal regulations

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

Some of the components are on the U.S. EPA TSCA Inventory List.

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

None of the ingredients are listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

None of the ingredients are listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Methanol (CAS NO# 67-56-1)	Listed
1,2-Ethylenediamine (CAS NO# 107-15-3)	Listed

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories

Eye irritation, Skin sensitization, Reproductive toxicity, Specific target organ toxicity- Repeated Exposure.

SARA 313 (TRI reporting)

Methanol (CAS NO# 67-56-1)	Listed
----------------------------	--------

Other federal regulations

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Safe Drinking Water Act (SDWA)

US State regulations.**US. New Jersey Worker and Community Right-to-Know Act**

Methanol (CAS NO# 67-56-1)	Listed
----------------------------	--------

US. Pennsylvania Worker and Community Right-to-Know Law

Methanol (CAS NO# 67-56-1)	Listed
----------------------------	--------

US. California Proposition 65**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):**

This product contains no chemicals known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other information**Revision date**

5/30/2024

Version #

1

References

ACGIH: Documentation of the Threshold Limit Values and Biological Exposure indices
ECHA: European Chemicals Agency
IARC: International Agency for Research on Cancer
OECD: Organization for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.