

**SAFETY DATA SHEET****M-1**<sup>®</sup>

According to OSHA-GHS (29 CFR 1910.1200 HCS 2012) (US)

**1. Identification****Product identifier**Product name **M-1****Other means of identification:**

Synonyms No information available

**Recommended use of the chemical and restrictions on use**

Recommended use No information available

Recommended restrictions No information available

**Manufacturer/Importer/Supplier/Distributor information:****Supplier** CHEM LINK INC., 353 East Lyons St., Schoolcraft, MI 49087**Emergency telephone** CHEMTREC: USA - 1-800-424-9300

International - (703) 527-3887

**2. Hazard(s) identification****OSHA Regulatory Status**

This material is considered as hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Classification of the substance or mixture****Physical Hazards** Not classified**Health Hazards** Serious eye damage/eye irritation Category 2A  
Skin sensitization Category 1B**Environment Hazards** Not classified**GHS label elements****Signal word** WARNING**Hazard statements** Causes serious eye irritation.  
May cause an allergic skin reaction.  
May causes damage to organs through prolonged or repeated exposure.**Precautionary statements****Prevention** Wash hands thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.**Response** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see first aid instructions on label). Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention.**Storage** Store locked up.

<b>Disposal</b>	Dispose of contents/container in accordance with local/ regional/ national/ international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None Known.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	Percentage % (wt/wt)
Aminoethyl aminopropyl trimethoxy silane	1760-24-3	0.5-2
Vinyltrimethoxysilane	2768-02-7	0.5-2
Dibutyltin oxide	818-08-6	0.25-0.75

### 4. First-aid measures

#### Description of first aid measures

<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
<b>Skin contact</b>	Remove contaminated clothing. If on skin, wash off immediately with soap and plenty of water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.
<b>Most important symptoms/effects, both acute and delayed</b>	No specific symptoms noted.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Thermal decomposition may release irritating, corrosive and/or toxic gases, vapors and fumes.
<b>Special protective equipment and precautions for firefighters</b>	Use water spray or fog for cooling exposed containers. Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing. See SDS Section 8 (Exposure Controls/Personal Protection).

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures****Methods and materials for containment and cleaning up**

Ensure adequate ventilation. Evacuate unnecessary personnel. Avoid breathing vapor, mist, or spray. Avoid contact with skin, eyes and clothing. Wear appropriate personal protective equipment (PPE) as detailed in Section 8.

Sweep up or vacuum up spillage and collect in suitable container for disposal. Dispose in accordance with regulations.

**7. Handling and storage****Precautions for safe handling**

Use with adequate ventilation. Keep away from heat, sparks and open flame. - No smoking. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Apply good hygienic practices.

**Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

None of the components in this product is listed.

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

Components	Type	Value
Methanol (CAS NO# 67-56-1)	PEL (TWA)	200 ppm
		260 mg/m <sup>3</sup>
1,2-Ethylenediamine (CAS NO# 107-15-3)	PEL (TWA)	10 ppm
		25 mg/m <sup>3</sup>
Tin, organic compounds (as Sn)	PEL (TWA)	0.1 mg/m <sup>3</sup>

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

None of the components in this product is listed.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

None of the components in this product is listed.

**US. ACGIH Threshold Limit Values**

Components	Type	Value
Methanol (CAS NO# 67-56-1)	TLV (TWA)	200 ppm (Skin; BEI)
	TLV (STEL)	250 ppm (Skin; BEI)
1,2-Ethylenediamine (CAS NO# 107-15-3)	TLV (TWA)	10 ppm (Skin)
Tin, organic compounds (as Sn)	TLV (TWA)	0.1 mg/m <sup>3</sup> (Skin)
	TLV (STEL)	0.2 mg/m <sup>3</sup> (Skin)

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Tin, organic compounds (as Sn)	REL (TWA)	0.1 mg/m <sup>3</sup> (except Cyhexatin) (Skin)

**Ingredients with biological limit values**

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

<b>Appropriate engineering controls</b>	Provide eyewash station and safety shower. Provide adequate ventilation to minimize dust concentrations. Avoid all unnecessary exposure.
<b>Respiratory equipment</b>	Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
<b>Hand protection</b>	Wear chemical-resistant gloves.
<b>Eye protection</b>	Wear safety glasses with side shields (or goggles).
<b>Other protection</b>	Wear suitable protective clothing.
<b>General hygiene considerations</b>	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**

<b>Appearance</b>	
Form	No information available.
Color	Black
<b>Odor</b>	No information available.
<b>Odor threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting point</b>	No information available.
<b>Freezing point</b>	No information available.
<b>Initial boiling point and boiling range</b>	No information available.
<b>Flash point</b>	No information available.
<b>Evaporation rate</b>	No information available.
<b>Flammability (solid, gas)</b>	No information available.
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit – lower (%)	No information available.
Flammability limit – upper (%)	No information available.
Explosive limit - lower (%)	No information available.
Explosive limit - upper (%)	No information available.
<b>Vapor pressure</b>	No information available.
<b>Vapor density</b>	No information available.
<b>Relative density</b>	No information available.
<b>Density</b>	11.7 lbs/gal.
<b>Solubility(ies)</b>	
Solubility (water)	No information available.
<b>Partition coefficient (n-octanol/water)</b>	No information available.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition temperature</b>	No information available.
<b>Viscosity</b>	No information available.

## 10. Stability and reactivity

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

## 11. Toxicological information

### Information on likely routes of exposure

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

Numerical measures of toxicity			
Chemical Name	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
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

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	No information available.
<b>Skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	May damage fertility or the unborn child.
<b>Specific target organ toxicity - single exposure</b>	No information available.
<b>Specific target organ toxicity - repeated exposure</b>	May causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	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 <sub>50</sub>	Bluegill ( <i>Lepomis macrochirus</i> )	> 100 mg/L
	Crustacean EC <sub>50</sub>	Water flea ( <i>Daphnia magna</i> )	87.4 mg/L, 48h
	Algae EC <sub>50</sub>	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 <sub>50</sub>	Generic fish	1 mg/L, 48h
	Crustacean EC <sub>50</sub>	Water flea ( <i>Daphnia magna</i> )	2 mg/L, 48h
	Algae EC <sub>50</sub>	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
<b>UN number</b>	Not regulated	Not regulated	Not regulated
<b>UN proper shipping name</b>	Not dangerous goods	Not dangerous goods	Not dangerous goods
<b>Transport hazard class(es)</b>	Not regulated	Not regulated	Not regulated
<b>Packing group</b>	Not regulated	Not regulated	Not regulated
<b>Environmental hazards</b>	No	No	No
<b>Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes</b>	Not applicable.		
<b>Special Precaution(s)</b>	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.

All components are listed or exempt from 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
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**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
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**US. Pennsylvania Worker and Community Right-to-Know Law**

Methanol (CAS NO# 67-56-1)	Listed
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**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](http://www.P65Warnings.ca.gov).

## 16. Other information

<b>Revision date</b>	07-05-2021
<b>Version #</b>	5
<b>References</b>	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

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