



# SAFETY DATA SHEET

## The M&R Companies

1.

Product identifier **I-CLEAN-1**  
 Recommended use Use in accordance with supplier's recommendations.  
 Recommended Restrictions Industrial Use Only  
 Company Information The M&R Companies  
 440 Medinah Road. Roselle, IL 60172  
 Phone number: +1 (800) 736-6431

Emergency Information For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call Chemtrec - Emergency Number(s):  
 Within US and Canada: +1-(800) 424-9300  
 Outside US and Canada: +1-(703) 741-5970

## 2. Hazards identification

GHS classification  
 Physical hazards Not classified.  
 Health hazards Reproductive toxicity Category 2  
 Specific target organ toxicity following repeated exposure Category 1 (kidney, liver)  
 Environmental hazards Not classified.

GHS label elements  
 Signal word Danger



Hazard statement Suspected of damaging fertility or the unborn child. Causes damage to organs (kidney, liver) through prolonged or repeated exposure.

Precautionary statement  
 Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapour. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.  
 Response IF exposed or concerned: Get medical advice/attention.  
 Storage Store locked up.  
 Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.  
 Supplemental information 23 % of the mixture consists of component(s) of unknown acute inhalation toxicity.

## 3. Composition/information on ingredients

Components	CAS #	Percent
WATER	7732-18-5	60 - 70
2,2'-OXYDIETHANOL	111-46-6	10 - 15
2-(2-BUTOXYETHOXY)ETHANOL	112-34-5	1 - 5
2,2',2''-Nitrilotriethanol	102-71-6	0 - 1

## 4. First aid measures

First aid procedures  
 Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.  
 Skin Wash the skin immediately with soap and water. Get medical attention if irritation develops or persists. Get medical attention if irritation develops and persists.

Eye	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately.
Most important symptoms and effects, both acute and delayed	Oedema. Jaundice. Prolonged exposure may cause chronic effects.
Notes to physician	Keep victim under observation. Symptoms may be delayed.
General advice	IF exposed or concerned: Get medical advice/attention. 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. Show this safety data sheet to the doctor in attendance.

## 5. Fire-fighting measures

Suitable extinguishing media	Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	Avoid water in straight hose stream; will scatter and spread fire.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Protection of fire-fighters	Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. Avoid contact with skin and eyes.
Environmental precautions	Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	Use water spray to reduce vapours or divert vapour cloud drift. This product is miscible in water. Should not be released into the environment.  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.  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.

## 7. Handling and storage

Handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapour. Avoid contact with eyes. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. See Section 8 for personal protective equipment.
Storage	Store in a cool, dry place out of direct sunlight. Use appropriate container to avoid environmental contamination. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls / personal protection

Control parameters			
US. ACGIH Threshold Limit Values			
Components	Type	Value	Form
2-(2-BUTOXYETHOXY)ETHA NOL (CAS 112-34-5)	TWA	10 ppm	Inhalable fraction and vapor.
2,2',2''-Nitrilotriethanol (CAS 102-71-6)	TWA	5 mg/m <sup>3</sup>	
Engineering controls	Ensure adequate ventilation, especially in confined areas. Shower, hand and eye washing facilities near the workplace are recommended. Adequate ventilation should be provided so that exposure limits are not exceeded. Provide adequate general and local exhaust ventilation.		

Personal protective equipment	
Eye/face protection	Wear eye/face protection. Chemical respirator with organic vapour cartridge and full facepiece. Do not get in eyes. Eye wash fountain is recommended.
Skin protection	Wear appropriate chemical resistant clothing. Chemical resistant gloves.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	Wear appropriate chemical resistant gloves. Thermally protective gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves.

## 9. Physical and chemical properties

### Appearance

Physical state	Liquid.
Colour	Colourless.
Form	Liquid.
Odour	Slight.
Odour threshold	Not available.
pH	7 - 9
Melting point/Freezing point	< -15 °C (< 5 °F)
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Flammability limits in air, lower, % by volume	Not available.
Flammability limits in air, upper, % by volume	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.1 g/cm <sup>3</sup>
Solubility(ies)	
Solubility (water)	soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	2 - 4 mPa·s
Viscosity temperature	25 °C (77 °F)
Specific gravity	1.1

## 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. None under normal conditions.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Irritants. Nitrogen oxides (NO <sub>x</sub> ). No hazardous decomposition products are known.

## 11. Toxicological information

### Toxicological data

Components	Species	Test results
2-(2-BUTOXYETHOXY)ETHANOL (CAS 112-34-5)		
<u>Acute</u>		
Dermal		
LD50	Rat	2000 mg/kg

Components	Species	Test results
Oral LD50	Rat	5000 mg/kg
2,2',2''-Nitrilotriethanol (CAS 102-71-6)		
<u>Acute</u>		
Dermal LD50	Rabbit	> 2000 mg/kg
2,2'-OXYDIETHANOL (CAS 111-46-6)		
<u>Acute</u>		
Dermal LD50	Rabbit	11890 mg/kg
Oral LD50	Rat	16600 mg/kg 15.6 g/kg
Routes of exposure	Inhalation.	
Acute toxicity	Not known.	
Skin corrosion/irritation	No data available.	
Serious eye damage/eye irritation	Not available.	
Respiratory sensitiser	Not available.	
Skin sensitisation	Not available.	
Mutagenicity	Not available.	
Carcinogenicity	IARC Monographs. Overall Evaluation of Carcinogenicity 2,2',2''-Nitrilotriethanol (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	Suspected of damaging fertility or the unborn child.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Causes damage to organs (kidney, liver) through prolonged or repeated exposure.	
Aspiration hazard	Not available.	
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.	
Symptoms	Oedema. Jaundice.	
Other information	Not available.	

## 12. Ecological information

Ecotoxicological data			
Components		Species	Test results
2-(2-BUTOXYETHOXY)ETHANOL (CAS 112-34-5)			
Aquatic			
Acute			
Algae	EC50	Green algae ( <i>Scenedesmus bijugatus</i> )	> 100 mg/l, 96 hours
Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	1300 mg/l, 96 hours
2,2',2''-Nitrilotriethanol (CAS 102-71-6)			
Aquatic			
Acute			
Algae	EC50	Green algae ( <i>Scenedesmus subspicatus</i> )	169 mg/l, 96 hours
Crustacea	EC50	Daphnia magna	1386 mg/l, 24 hours
	LC50	Daphnia magna	739 - 2038 mg/l, 24 hours
Fish	LC50	Pimephales promelas	1800 - 11800 mg/l, 96 hours

Components	Species	Test results
2,2'-OXYDIETHANOL (CAS 111-46-6)		
Aquatic		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 75210 mg/l, 96 hours
Persistence and degradability	Not available.	
Bioaccumulation	Not available.	
Mobility	No data available.	
Hazardous to the ozone layer	No data available.	
Other adverse effects	No data available.	
Other information	Not available.	

### 13. Disposal considerations

Disposal methods	Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.
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

IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

### 15. Regulatory information

Regulatory information	Ensure this material in compliance with federal requirements and ensure conformity to local regulations.
Montreal Protocol	Not applicable.
Rotterdam Convention	Not applicable.
Stockholm Convention	Not applicable.

### 16. Other information

Issue date	12-April-2017
Bibliography	ACGIH ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity
Disclaimer	This safety data sheet was prepared in accordance with JIS Z 7253:2012. The information in the sheet was written based on the best knowledge and experience currently available. This product is intended for industrial use only. Should it ever be applied for medical or other purposes, this is completely the responsibility of the purchaser. Ingesting or injecting this product or using it in such a manner that some of it might remain within the body is forbidden. Do not do this under any circumstances. This information is based upon the latest data available to us, but should not be read as a guarantee of the contents, physical properties or danger and harmfulness levels. Since all chemicals may have hitherto unknown deleterious properties, care should always be taken during use. It is the responsibility of every user to establish the necessary safety precautions before employment. In addition, the present information is intended for normal usage; however, if special usage is contemplated, then the appropriate safety precautions and application conditions should be carefully prepared.