MacDermid Enthone

Safety Data Sheet

Section 1. Identification

Product name : **ENTHONE® M-3-N**

Product code : 211591

Uses advised against : Consumer, private households, general public

Product type : Liquid.

Date of issue/Date of revision : June 1 2017.

Manufacturer - Supplier	Telephone no.:	Emergency phone:
MacDermid Enthone Inc. 245 Freight Street Waterbury, CT 06702	Tel: (203) 575-5700	UNITED STATES AND CANADA: Tel: 800-424-9300 INTERNATIONAL, CALL Tel: +1 703-527-3887 (collect calls accepted)
MacDermid Enthone de Mexico S.A. De C.V. Norte 59 No. 896 Col. Industrial Vallejo Mexico, D.F. 02300 Mexico	Tel: 52 55 5078 3904	Tel: 01 800 002 1400 Tel: (55) 5559 1588
Anion Química Industrial S.A. Rua Eli Valter Cesar, 110 - Jardim Alvorada, CEP: 06612-130, Jandira, SP Brasil	Tel: + 55 11 4789-8585	Tel: 0800 707 7022 Tel: 0800 172 020
RevestSul Produtos Químicos Ltda. Rua Antônio Rasteiro Filho, 500 Parque Industrial José Garcia Gimenes CEP: 86183-751, Cambé, PR Brasil	Tel.: +55 043 3223 3550	Tel: 0800 707 7022 Tel: 0800 172 020
MacDermid Performance Solutions Canada Inc. 4530 Eastgate Parkway Mississauga, Ontario L4W 3W6 Canada	Tel: (905) 624-1065	DOMESTIC NORTH AMERICA 800-424-9300 INTERNATIONAL, CALL +1 703-527-3887 (collect calls accepted)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (inhalation) - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Continued on next page

Section 2. Hazards identification

Hazard pictograms :



Signal word : Danger

Hazard statements : Fatal if inhaled.
Causes serious eye irritation.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Suspected of causing genetic defects.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear eye or face protection. Wear respiratory protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. 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 attention.

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
2-(2-ethoxyethoxy)ethyl acetate	20-30	112-15-2
barium sulfate	10-20	7727-43-7
Cadmium (Non-pyrophoric)	10-20	7440-43-9
Mica-group minerals	1-10	12001-26-2
Inorganic filler	1-10	-
iron hydroxide oxide yellow	1-10	51274-00-1
selenium	1-10	7782-49-2
zinc Salt	1-10	-
crystalline silica, respirable powder	0.1-1.0	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Continued on next page

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Fatal if inhaled.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Section 4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Continued on next page

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
barium sulfate	**ACGIH TLV (United States, 4/2014). Notes: The value is for total dust containing no asbestos and < 1% crystalline silica.** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **ACGIH TLV (United States, 2001).** TWA: 10 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Cadmium (Non-pyrophoric)	**ACGIH TLV (United States, 9/2004).** TWA: 0.002 mg/m³ 8 hours. Form: As Cadmium **OSHA PEL Z2 (United States, 2/2013).** TWA: 0.2 mg/m³ 8 hours. Form: Dust CEIL: 0.6 mg/m³ Form: Dust TWA: 0.1 mg/m³ 8 hours. Form: Fume CEIL: 0.3 mg/m³ Form: Fume

Continued on next page

Section 8. Exposure controls/personal protection

	OSHA PEL (United States, 2/2013). TWA: 5 µg/m³, (as Cd) 8 hours. **ACGIH TLV (United States, 4/2014).** TWA: 0.01 mg/m³, (as Cd) 8 hours. Form: Inhalable fraction TWA: 0.002 mg/m³, (as Cd) 8 hours. Form: Respirable fraction
Mica-group minerals	**ACGIH TLV (United States, 4/2014). Notes: Respirable fraction; see Appendix C, paragraph C.** TWA: 3 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 3 mg/m³ 10 hours. Form: Respirable fraction **ACGIH TLV (United States, 2002).** TWA: 3 mg/m³ 8 hours. **OSHA PEL Z3 (United States, 2/2013).** TWA: 20 mppcf 8 hours.
Inorganic filler	**OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust **ACGIH TLV (United States, 4/2014). Notes: Substance identified by other sources as a suspected or confirmed human carcinogen. 1996 Adoption Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) : 36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A -- Carcinogens.** TWA: 10 mg/m³ 8 hours.
iron hydroxide oxide yellow	**ACGIH (United States).** TWA: 5 mg/m³ 8 hours. **OSHA (United States).** TWA: 10 mg/m³ 8 hours.
selenium	**ACGIH TLV (United States, 4/2014). Notes: as Se** TWA: 0.2 mg/m³, (as Se) 8 hours. **NIOSH REL (United States, 10/2013). Notes: Note: The REL and PEL also apply to other selenium compounds (as Se) except Selenium hexafluoride.** TWA: 0.2 mg/m³, (as Se) 10 hours.
crystalline silica, respirable powder	**OSHA PEL Z3 (United States, 2/2013).** TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable **ACGIH TLV (United States, 4/2014). Notes: Respirable fraction; see Appendix C, paragraph C.** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013). Notes: See Appendix A - NIOSH Potential Occupational Carcinogen** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Continued on next page

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Viscous.]

Color : Orange.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : >204.44°C (>400°F)

Flash point : Closed cup: >93.33°C (>200°F) [Setaflash]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.69

Solubility : Not available.

VOC : 360.7 g/l

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Continued on next page

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Incompatibility with various substances : Reactive or incompatible with the following materials: oxidizing materials, metals, acids and moisture.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other Hazardous decomposition products : carbon oxides (CO, CO_2), sulfur oxides (SO_2, SO_3 etc.), cadmium oxides, selenium selenium oxides

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-ethoxyethoxy)ethyl acetate	LD50 Dermal	Rabbit	15000 mg/kg	-
	LD50 Oral	Rat	11000 mg/kg	-
Cadmium (Non-pyrophoric)	LD50 Oral	Rat	2330 mg/kg	-
iron hydroxide oxide yellow	LD50 Oral	Rat	10000 mg/kg	-
selenium	LD50 Oral	Rat	6700 mg/kg	-
	LD50 Oral	Rat	6700 mg/kg	-
zinc Salt	LC50 Inhalation Dusts and mists	Rat	>5040 mg/m³	4 hours
	LD50 Oral	Rat	>2000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-(2-ethoxyethoxy)ethyl acetate	Eyes - Moderate irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Inorganic filler	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Cadmium (Non-pyrophoric)	-	Subject: Mammalian-Animal	Equivocal
	-	Subject: Mammalian-Human	Equivocal

Carcinogenicity

No applicable toxicity data

Additional information:

Inorganic filler: Carcinogen status based on inhalation of particulate form of this chemical If this product is a liquid, exposure to this particulate is unlikely under ordinary conditions of use.

Classification

Continued on next page

Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
Cadmium (Non-pyrophoric)	+	1	Known to be a human carcinogen.
Inorganic filler	-	2B	-
selenium	-	3	-
crystalline silica, respirable powder	-	1	Known to be a human carcinogen.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Cadmium (Non-pyrophoric)	-	-	Equivocal	Rat - Male	Oral: 155 mg/kg	-
	-	-	Equivocal	Rat - Female	Oral: 220 mg/kg	-
	-	Equivocal	-	Rat - Male	Intraperitoneal: 1124 µg/kg	-

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Cadmium (Non-pyrophoric)	Equivocal - Oral	Rat	23 mg/kg	-
	Equivocal - Intravenous	Rat	8 mg/kg	-

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
crystalline silica, respirable powder	Category 1	Inhalation	respiratory tract

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Cadmium (Non-pyrophoric)	Category 1	Not determined	Not determined
crystalline silica, respirable powder	Category 1	Not determined	kidneys and respiratory tract

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Fatal if inhaled.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Continued on next page

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : Suspected of causing genetic defects.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	2646.6 mg/kg
Inhalation (dusts and mists)	0.1873 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-(2-ethoxyethoxy)ethyl acetate	LC50 110 mg/l	Fish	96 hours
barium sulfate	Acute EC50 634 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 32000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
Cadmium (Non-pyrophoric)	Acute EC50 97 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 0.095 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 200 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 2 µg/l Fresh water	Algae - Parachlorella kessleri - Exponential growth phase	72 hours

Continued on next page

Section 12. Ecological information

	Chronic NOEC 0.02 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
Inorganic filler	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
selenium	Acute EC50 99000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	3 days
	Acute EC50 96000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	4 days
	Acute EC50 2400 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 940 µg/l Fresh water	Crustaceans - Hyalella azteca - Adult	48 hours
	Acute LC50 0.43 mg/l	Daphnia	96 hours
	Acute LC50 1200 µg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 1 mg/l	Fish	96 hours
	Acute LC50 11.5 mg/l	Fish	96 hours
	Acute LC50 12.5 mg/l	Fish	96 hours
	Acute LC50 45 mg/l	Fish	96 hours
	Acute LC50 48 mg/l	Fish	96 hours
	Acute LC50 0.93 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 85 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 330 to 640 µg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	60 days
zinc Salt	Acute LC50 >30000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1826000 µg/l Fresh water	Fish - Pimephales promelas - Neonate	96 hours
	Chronic NOEC 1 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-(2-ethoxyethoxy)ethyl acetate	0.76	3.2	low
Inorganic filler	-	352	low
selenium	-	9226	high
zinc Salt	-	60960	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

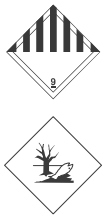
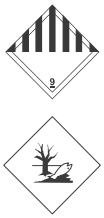
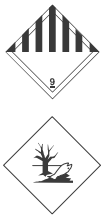
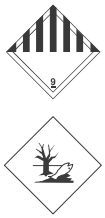
Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a

Continued on next page

Section 13. Disposal considerations

safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	UN3082	UN3082	UN3082	UN3082
UN proper shipping name	-	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cadmium (Non-pyrophoric))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cadmium (Non-pyrophoric))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cadmium (Non-pyrophoric))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cadmium (Non-pyrophoric))
Transport hazard class(es)	-	-	9 	9 	9 	9 
Packing group	-	-	III	III	III	III
Environmental hazards	No.	No.	Yes.	Yes.	Yes.	Yes.

Additional information - TDG Classification	**Remarks** NMFC ITEM 101720, CLASS 55
Additional information - Mexico Classification	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Additional information - UN Classification	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Additional information - IMDG Classification	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Additional information - IATA Classification	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Continued on next page

Section 14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.

TSCA 5(a)2 final significant new use rules: mercury

TSCA 12(b) one-time export notification: No products were found.

TSCA 12(b) annual export notification: No products were found.

Refer to Proposed Rule (59 Federal Register 11122, March 9, 1994) for details on TSCA 12(b) applicability for lead.

United States inventory (TSCA 8b) : All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	2-(2-ethoxyethoxy)ethyl acetate Cadmium (Non-pyrophoric) zinc Salt selenium mercury lead	112-15-2 7440-43-9 - 7782-49-2 7439-97-6 7439-92-1	20-30 10-20 1-10 1-10 0.0001-0.001 0.0001-0.001
Supplier notification	2-(2-ethoxyethoxy)ethyl acetate Cadmium (Non-pyrophoric) zinc Salt selenium	112-15-2 7440-43-9 - 7782-49-2	20-30 10-20 1-10 1-10

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada : All components are listed or exempted.

International lists

National inventory

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	3
Flammability	1
Physical hazards	1

Procedure used to derive the classification

Classification	Justification
Acute Tox. 2, H330	Calculation method
Eye Irrit. 2A, H319	Calculation method
Muta. 2, H341	Calculation method
Carc. 1A, H350	Calculation method
Repr. 2, H361 (Fertility)	Calculation method
Repr. 2, H361 (Unborn child)	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

History

Date of issue/Date of revision : June 1 2017.

Date of previous issue : April 18 2017.

Version : 1.05

Prepared by : **Regulatory Affairs Department**
enthone.msds@macdermidenthone.com

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.