

SAFETY DATA SHEETS

This SDS packet was issued with item:

078924699

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078349108 078579705 078885549 078885556

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

078915749

Revision date: 11/21/2011
 Print date: 11/21/2011

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Morphine Sulfate Injection, USP

Product code: NDC 0641-6068-01 NDC 0641-6070-01 NDC 0641-6070-25
 NDC 0641-6071-01 NDC 0641-6071-25 NDC 0641-6072-01
 NDC 0641-6073-01 NDC 0641-6073-25 NDC 0641-6075-01 NDC 0641-6075-25

Synonyms: None
Chemical Family: Analgesic
Product Type: Regulated Prescription Drug
Container information: 1 ml vials and 10 ml multiple dose vials
Product Use: Pharmaceutical

Supplier:
 WEST-WARD PHARMACEUTICALS
 EATONTOWN, NJ 07724

Emergency telephone number: CHEMTREC: USA & Canada (800) 424-9300 OUTSIDE USA +1 703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	UN Number:	Classification:
Morphine Sulfate Pentahydrate 6211-15-0	0.5-1.5	None	None
Monobasic Sodium Phosphate, Monohydrate 7558-80-7	1	None	None
Phenol 108-95-2	<0.5	UN2821	C;R34 T;R24/25
Sodium Phosphate, Dibasic 7558-79-4	<1.0	None	None
Sodium Formaldehydesulfoxylate 149-44-0	<0.5	None	None
Water 7732-18-5	>96	None	None

3. HAZARDS IDENTIFICATION

Emergency overview: Harmful if swallowed. Central Nervous System depression. May cause eye and skin irritation.

Principle routes of exposure: Absorbed through skin. Eye contact. Ingestion.

Inhalation: Inhalation not likely under normal use conditions.

Product name: Morphine Sulfate Injection, USP

Ingestion: No specific hazards other than therapeutic effects.

Skin contact: May cause skin irritation.

Eye contact: May cause eye irritation.

4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Notes to physician: See patient package insert in shipping carton for complete information.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Use foam or all purpose dry chemicals to extinguish.
Special protective equipment for firefighters:	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Specific methods:	No information available.
Flash point:	Not determined
Autoignition temperature:	Not applicable
Flammable limits in air-lower (%):	Not applicable
Flammable limits in air-upper (%):	Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).

Environmental precautions: No information available.

Methods for cleaning up: If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. HANDLING AND STORAGE

Handling:

Product name: Morphine Sulfate Injection, USP

Technical measures/precautions: Wash thoroughly after handling.

Storage:

Technical measures/storage conditions: Keep containers tightly closed in a cool, well-ventilated place. Store between 15-30°C (59 to 86°F). Protect from light. Protect from freezing. Follow Schedule II controlled substance requirements.

Incompatible products: No special restrictions on storage with other products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Component	OSHA- Time Weighted Average:	OSHA- Short Term Exposure Limit:	OSHA- Ceiling Limits	ACGIH- Time Weighted Average:	ACGIH- Short Term Exposure Limit:	ACGIH- Ceiling Limit Value:
Morphine Sulfate Pentahydrate 6211-15-0	None	None	None	None	None	None
Monobasic Sodium Phosphate, Monohydrate 7558-80-7	None	None	None	None	None	None
Phenol 108-95-2	= 5 ppm TWA = 19 mg/m ³ TWA	None	None	= 5 ppm TWA	None	None
Sodium Phosphate, Dibasic 7558-79-4	None	None	None	None	None	None
Sodium Formaldehydesulfoxylate 149-44-0	None	None	None	None	None	None
Water 7732-18-5	None	None	None	None	None	None

Engineering measures: No special containment is required. Good general ventilation should be sufficient to control airborne levels.

Personal protective equipment:

Respiratory protection: Perform exposure monitoring for this product and its components to ensure that employees are not exposed to levels greater than applicable regulatory limits. If exposure levels exceed regulatory limits, implement a respiratory protection program including respiratory protection that is in compliance with OSHA 29 CFR 1910.134 (in the US) or equivalent regulation in other regions. Fire fighting requires the use of a self-contained breathing apparatus with full face piece and positive pressure mode.

Hand protection: Use chemical resistant, impervious gloves.

Skin and body protection: Work uniform or laboratory coat.

Eye protection: Safety glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid

Appearance: Aqueous solution

Product name: Morphine Sulfate Injection, USP

Color:	Colorless
Odor:	Not available.
pH:	2.5 - 5.5
Molecular weight:	Not available.
Boiling point/range:	Not available.
Melting point/range:	Not available.
Density:	Not available.
Vapor pressure:	Not available.
Evaporation rate:	Not available.
Solubility:	Soluble in water.
Partition coefficient (n-octanol/water):	Not available.
Viscosity:	Not available.
% Volatile by Volume:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Polymerization:	Not applicable
Hazardous decomposition products:	Not available.
Materials to avoid:	Acids. Bases. Oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Component	LD50s and LC50s
Morphine Sulfate Pentahydrate 6211-15-0	Oral LD50 Rat: 973 mg/kg; Oral LD50 Mouse: 1125 mg/kg
Monobasic Sodium Phosphate, Monohydrate 7558-80-7	Oral LD50 Rat = 8290 mg/kg
Phenol 108-95-2	Inhalation LC50 Mouse = 177 mg/m ³ Oral LD50 Mouse = 270 mg/kg Inhalation LC50 Rat = 316 mg/m ³ Oral LD50 Rat = 317 mg/kg Dermal LD50 Rabbit = 630 mg/kg
Sodium Phosphate, Dibasic 7558-79-4	Oral LD50 Rat = 17 g/kg
Sodium Formaldehydesulfoxylate 149-44-0	Oral LD50 Rat >2 gm/kg Oral LD50 Mouse = 4 gm/kg
Water 7732-18-5	Oral LD50 Rat: >50000 mg/kg

Product name: Morphine Sulfate Injection, USP

Acute toxicity: Signs and symptoms of overexposure to narcotic analgesics may include respiratory depression, drowsiness progressing to stupor or coma, rash, itching, headache, nausea, vomiting, muscle relaxation, cold and clammy skin, slow heart rate, low blood pressure, apnea, circulatory collapse, cardiac arrest, and possibly death.

Chronic toxicity: Target organs: Nervous System, Gastrointestinal tract, kidney. Contains material which causes damage to the following organs: kidneys, lungs, liver, mucous membranes, spleen, skin, eye, lens or cornea, and pancreas.

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. No data is available on the product itself.

Mutagenic effects: No data is available on the product itself.

Reproductive toxicity: Teratogenic at maternally toxic doses. See patient package insert for additional information.

FDA Pregnancy Category C

12. ECOLOGICAL INFORMATION

Environmental properties:

Component	Ecotoxicity - Water Flea Data	Fish Species Ecotoxicity	Ecotoxicity - Freshwater Algae Data	Microtox Etotoxicity Data
Morphine Sulfate Pentahydrate 6211-15-0	None.	None.	None.	None.
Monobasic Sodium Phosphate, Monohydrate 7558-80-7	None.	None.	None.	None.
Phenol 108-95-2	= 23.0 mg/L LC50 water flea	LC50 (96 hr) fathead minnow:24 mg/L.;LC50 (96 hr) rainbow trout:8.9 mg/L:Flow-through, 13-15 °C, pH 7.7-8.1, 565-700 mg/L CaCO ₃ .;LC50 (96 hr) bluegill:23.88 mg/L:Static, 25 °C, pH 7.5, 20.0 mg/L CaCO ₃ .	None.	= 28.8 mg/L EC50 Photobacterium phosphoreum = 31.6 mg/L EC50 Photobacterium phosphoreum
Sodium Phosphate, Dibasic 7558-79-4	None.	None.	None.	None.
Sodium Formaldehydesulfoxylate 149-44-0	None.	None.	None.	None.
Water 7732-18-5	None.	None.	None.	None.

Ecotoxicity effects: No data available

Product name: Morphine Sulfate Injection, USP

Bioaccumulation: No data available

13. DISPOSAL CONSIDERATIONS

Waste Classification: Follow schedule II controlled substance requirements.

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations.

14. TRANSPORT INFORMATION

DOT:

DOT shipping name:	None
UN Number:	None
DOT Packing Group:	None
DOT Hazard class:	None

TDG (Canada):

TDG Proper shipping name:	None
TDG UN/NA Number:	None
TDG Packing Group:	None
TDG Hazard class:	None

ADR/RID:

ADR Official Transport Name:	None
ADR Proper shipping name:	None
ADR UN/NA number:	None
ADR Hazard Class:	None

ICAO / IATA:

IATA Proper shipping name:	None
IATA UN NUMBER	None
IATA Primary Hazard	None
IATA Packing group:	None
ICAO ERG Code:	None

IMO / IMDG:

IMDG Proper Shipping Name:	None
IMDG Hazard Class and Division:	None
IMDG Packing Group:	None
IMDG Subsidiary Risks:	None

15. REGULATORY INFORMATION

U.S. Regulations:

TSCA Inventory List - The product is exempt from TSCA, it is FDA Regulated

OTHER REGULATIONS:

Japanese Inventory (ENCS) This product does not comply with JPENCS

Product name: Morphine Sulfate Injection, USP

Component	Weight %	RCRA Status:	CERCLA Reportable Quantity:	CERCLA/SARA - 302 Ext. haz. substances:	Listed as Sara 313 title III:
Morphine Sulfate Pentahydrate	0.5-1.5	Not Listed	Not Listed	Not Listed	Not Listed
Monobasic Sodium Phosphate, Monohydrate	1	Not Listed	Not Listed	Not Listed	Not Listed
Phenol	<0.5	waste number U188	= 454 kg final RQ = 1000 lb final RQ = 45.4 kg final RQ = 100 lb final RQ = 0.454 kg final RQ = 1 lb final RQ	= 10,000 lb TPQ upper threshold = 500 lb TPQ lower threshold	form R reporting required for 1.0% de minimis concentration
Sodium Phosphate, Dibasic	<1.0	Not Listed	= 2270 kg final RQ = 5000 lb final RQ	Not Listed	Not Listed
Sodium Formaldehydesulfoxylate	<0.5	Not Listed	Not Listed	Not Listed	Not Listed
Water	>96	Not Listed	Not Listed	Not Listed	Not Listed

STATE REGULATIONS:

Component	California Prop 65:	Minnesota Right-To-Know:	Florida Right-to-Know Reporting List:	Rhode Island Right-to-Know List:	Massachusetts Right-to-Know List:	Pennsylvania Right-to-Know:	New Jersey Right-to-Know:
Morphine Sulfate Pentahydrate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Monobasic Sodium Phosphate, Monohydrate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Phenol	Not Listed	Skin	Not Listed	Toxic, Flammable	extraordinarily hazardous	environmental hazard	sn 1487
Sodium Phosphate, Dibasic	Not Listed	Not Listed	Not Listed	Not Listed	Present	environmental hazard	sn 1723
Sodium Formaldehydesulfoxylate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

CANADIAN REGULATIONS:

Canada DSL Inventory List -

This product does not comply with DSL

EU EINECS List -

This product does not comply with EINECS

Risk Phrases:

NONE

Safety Phrases:

NONE

16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s):

Revised company name from Baxter to West-Ward. Updated NDC codes

Prepared by:

West-Ward Pharmaceuticals

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.

End of safety data sheet

Product name: Morphine Sulfate Injection, USP

Product id: 1091065

Product name: Morphine Sulfate Injection, USP

SAFETY DATA SHEET

Morphine Sulfate Injection, USP



Section 1. Identification

GHS product identifier	: Morphine Sulfate Injection, USP
Synonyms	: None.
Product code	: NDC 0641-6125-25 NDC 0641-6125-01 NDC 0641-6126-25 NDC 0641-6126-01 NDC 0641-6127-25 NDC 0641-6127-01
Chemical family	: Analgesic.
Product type	: Regulated prescription drug.
Container information	: 1 ml vials.
Identified uses	: Pharmaceutical.
Supplier's details	: West-Ward Pharmaceuticals 401 Industrial Way Eatontown NJ 07724 Phone (732 542 1191) Fax (732 720 6220)
Emergency telephone number (with hours of operation)	: CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 24/7

Section 2. Hazards identification

OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	: Not classified.
<u>GHS label elements</u>	
Signal word	: No signal word.
Hazard statements	: No known significant effects or critical hazards.
<u>Precautionary statements</u>	
Prevention	: Not applicable.
Response	: Not applicable.
Storage	: Not applicable.
Disposal	: Not applicable.
Hazards not otherwise classified	: None known.
Hazards not otherwise classified (HNOC)	: None known.



Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : None.

CAS number/other identifiers

CAS number : Not applicable.
Product code : NDC 0641-6125-25 NDC 0641-6125-01 NDC 0641-6126-25 NDC 0641-6126-01 NDC 0641-6127-25 NDC 0641-6127-01

Ingredient name	%	CAS number
Water	60 - 100	7732-18-5
Morphine Sulphate Pentahydrate	0.1 - 1	6211-15-0
EDTA Disodium Salt	0.01 - 0.025	6381-92-6
Citric Acid Monohydrate	0.025 - 0.1	5949-29-1
Sodium Chloride	0.1 - 1	7647-14-5
Hydrochloric Acid Solution	As needed	7647-01-0
Sodium hydroxide	As needed	1310-73-2

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

There are no 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.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

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.

Section 4. First aid measures

- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

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 : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : No special measures are required.

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. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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).

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.
- Large spill** : Stop leak if without risk. Move containers from spill area. 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. 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).
- 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. 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. 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

None.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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.
- 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: safety glasses with side-shields.
- 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.
- 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 supplied air 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. [Aqueous solution.]
Color	: Colorless.
Odor	: Not available.
Odor threshold	: Not available.
pH	: 2.5 to 5.5
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Not available.
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	: Not available.
Solubility in water	: Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.

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.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
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 : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

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

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Potential chronic health effects

General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{oc})	: Not available.
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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 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 safe way. 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	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

AERG : Not applicable.

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.

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

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): Not determined.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.



Section 15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 313

No products were found.

State regulations

- Massachusetts** : None of the components are listed.
New York : None of the components are listed.
New Jersey : None of the components are listed.
Pennsylvania : None of the components are listed.

California Prop. 65

No products were found.

Section 16. Other information

History

- Date of issue mm/dd/yyyy** : 09/15/2015
Version : 1
Prepared by : KMK Regulatory Services Inc.
- 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

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.