



SAFETY DATA SHEET

1. Identification

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| Product identifier | OAKFLO® DSY 910 METALWORKING FLUID |
| Other means of identification | |
| SDS number | Not applicable |
| Recommended use | METALWORKING FLUID |
| Recommended restrictions | None known. |
| Manufacturer/Importer/Supplier/Distributor information | |
| Manufacturer | |
| Company name | CIMCOOL® Industrial Products LLC 3000 Disney Street Cincinnati, Ohio 45209 |
| Telephone (General Information) | 513-458-8199 |
| Emergency telephone number | 1-800-424-9300 (CHEMTREC) |
| Emergency telephone number (outside USA) | 1-703-527-3887 (CHEMTREC) |

2. Hazard(s) identification

| | | |
|------------------------------|---|---|
| Physical hazards | Corrosive to metals | Category 1 |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2A |
| | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |
| Environmental hazards | Not classified. | |
| OSHA defined hazards | Not classified. | |

Label elements



| | |
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| Signal word | Warning |
| Hazard statement | May be corrosive to metals. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. |
| Precautionary statement | |
| Prevention | Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. |
| Response | IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. 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 INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If swallowed: Call a poison center/doctor if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse. |
| Storage | Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place. Store away from incompatible materials. Store in accordance with local/regional/national/international regulations. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|--|--------------------------|------------|---------|
| TRIETHANOLAMINE | | 102-71-6 | 10 - 30 |
| MONOETHANOLAMINE | | 141-43-5 | 3 - 7 |
| NEODECANOIC ACID | | 26896-20-8 | 3 - 7 |
| DECANEDIOIC ACID | | 111-20-6 | 1 - 5 |
| HEXAHYDRO-1,3,5-TRIS (2-HYDROXYETHYL)-S- TRIAZINE | | 4719-04-4 | 1 - 5 |
| Other components below reportable levels | | | 60 - 70 |

The exact percentages of hazardous ingredients have been withheld as a trade secret.

4. First-aid measures

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| Inhalation | If symptoms are experienced, remove source of contamination or move victim to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If irritation persists, get medical attention. Wash clothing separately before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. |
| Ingestion | Rinse mouth thoroughly. Do not induce vomiting. Drink 1 or 2 glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Most important symptoms/effects, acute and delayed | Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Defatting of the skin. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Symptoms may be delayed. |
| General information | IF exposed or concerned: Get medical advice/attention. Take off all contaminated clothing immediately. |

5. Fire-fighting measures

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| Suitable extinguishing media | Water fog. Foam. Dry chemicals. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | Not applicable, non-combustible. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Wear suitable protective equipment. |
| Fire-fighting equipment/instructions | Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes. Move container from fire area if it can be done without risk. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Absorb in vermiculite, dry sand or earth and place into containers. Clean up in accordance with all applicable regulations. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. |
| Environmental precautions | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination. Contact local authorities in case of spillage to drain/aquatic environment. |

7. Handling and storage

Precautions for safe handling

Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not breathe vapor. Do not ingest. Do not get this material on clothing. Avoid contact with skin and eyes. Avoid prolonged and repeated contact. Use only in well-ventilated areas. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Wash contaminated clothing before reuse. Practice good housekeeping. Handle and open container with care. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

To maintain product quality, do not store in heat or direct sunlight. Use care in handling/storage. Keep containers closed when not in use. Store in original container. Store away from incompatible materials (see Section 10 of the SDS). Store in a well-ventilated place. Do not allow material to freeze. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use.

8. Exposure controls/personal protection

Occupational exposure limits

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

| | Type | Value |
|------------------------------------|------|---------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | PEL | 6 mg/m ³ |
| | | 3 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| | Type | Value |
|------------------------------------|------|----------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 15 mg/m ³ |
| | | 6 ppm |
| | TWA | 8 mg/m ³ |
| | | 3 ppm |

US. ACGIH Threshold Limit Values

| | Type | Value |
|------------------------------------|------|---------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 5 mg/m ³ |
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |

Appropriate engineering controls

Ensure compliance with applicable exposure limits. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields. Do not get in eyes. Eye wash fountain is recommended.

Skin protection

Hand protection

Use protective gloves made of: Nitrile.

Other

Wear suitable protective clothing and gloves.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

CLEAR

Physical state

Liquid.

Form

Liquid.

Color

Not available.

Odor

CHEMICAL

Odor threshold

Not available.

pH

9.8

Melting point/freezing point

< 20 °F (< -6.7 °C)

| | |
|---|-------------------------|
| Initial boiling point and boiling range | > 212 °F (> 100 °C) |
| Flash point | Not Applicable |
| Evaporation rate | Like water when diluted |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | 100 % Water Miscible |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| pH in aqueous solution | 9.1 @ 5% |
| Specific gravity | 1.058 |
| VOC ASTM D2369 | 6 % |

10. Stability and reactivity

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|---|---|
| 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. Hazardous polymerization does not occur. |
| Conditions to avoid | Contact with incompatible materials. |
| Incompatible materials | Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines. Strong acids. Strong oxidizing agents. Avoid contact with oxidizers or reducing agents. |
| Hazardous decomposition products | Smoke, fumes, oxides of nitrogen, and oxides of carbon |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Ingestion | May be harmful if swallowed. Expected to be a low ingestion hazard. |
| Inhalation | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Causes skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. |
| Eye contact | Causes serious eye irritation. Harmful in contact with eyes. |

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Defatting of the skin.

Information on toxicological effects

Acute toxicity May be harmful if swallowed. May cause respiratory irritation.

| Components | Species | Test Results |
|---------------------------------|----------------|---------------------|
| DECANEDIOIC ACID (CAS 111-20-6) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 1175 mg/kg |
| <i>Oral</i> | | |
| LC50 | Rat | > 4500 mg/l |
| LD50 | Rat | 2750 mg/kg |

| Components | Species | Test Results |
|-----------------------------------|------------|-------------------------------------|
| MONOETHANOLAMINE (CAS 141-43-5) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 1025 mg/kg |
| <i>Inhalation</i> | | |
| LC50 | Mouse | > 1210 mg/m ³ |
| <i>Oral</i> | | |
| LD50 | Guinea pig | 620 mg/kg |
| | Mouse | 700 mg/kg |
| | Rat | 1515 mg/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 50 mg/kg |
| | Rat | 67 mg/kg |
| NEODECANOIC ACID (CAS 26896-20-8) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 3160 mg/kg |
| <i>Inhalation</i> | | |
| LD50 | Rat | > 511 mg/m ³ > 3 mg/l |
| <i>Oral</i> | | |
| LD50 | Rat | 2000 mg/kg |
| TRIETHANOLAMINE (CAS 102-71-6) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |
| <i>Oral</i> | | |
| LD50 | Guinea pig | 5300 mg/kg |
| | Rat | 8 g/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 1450 mg/kg |

* Estimates for product may be based on additional component data not shown.

| | |
|---|--|
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. Defatting, drying and cracking of skin. |
| Serious eye damage/eye irritation | Causes serious eye irritation. Harmful in contact with eyes. |
| Respiratory or skin sensitization | |
| Respiratory sensitization | Not classified. |
| Skin sensitization | Not classified. |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |
| IARC Monographs. Overall Evaluation of Carcinogenicity | |
| TRIETHANOLAMINE (CAS 102-71-6) | 3 Not classifiable as to carcinogenicity to humans. |
| US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | |
| Not listed. | |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. |
| Specific target organ toxicity - single exposure | Respiratory tract irritation. |
| Specific target organ toxicity - repeated exposure | Not classified. |
| Aspiration hazard | May be harmful if swallowed and enters airways. |
| Chronic effects | Prolonged exposure may cause chronic effects. |
| Further information | Symptoms may be delayed. |

12. Ecological information

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

| Components | | Species | Test Results |
|---------------------------------|------|--|------------------------------|
| DECANEDIOIC ACID (CAS 111-20-6) | | | |
| <i>Acute</i> | | | |
| Crustacea | EC50 | Daphnia | 85.7 mg/l, 48 hours |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) | 97 mg/l, 96 hours |
| MONOETHANOLAMINE (CAS 141-43-5) | | | |
| Aquatic | | | |
| Fish | LC50 | Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>) | 114 - 196 mg/l, 96 hours |
| TRIETHANOLAMINE (CAS 102-71-6) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (<i>Ceriodaphnia dubia</i>) | 565.2 - 658.3 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) | 10610 - 13010 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

| | |
|------------------|-------|
| MONOETHANOLAMINE | -1.31 |
| TRIETHANOLAMINE | -1 |

Mobility in soil This product is miscible in water.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Do not contaminate ponds, waterways or ditches with chemical or used container. Consult authorities before disposal. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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 Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

| | |
|-------------------------------------|---|
| UN number | UN3267 |
| UN proper shipping name | Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Label(s) | 8 |
| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling. |
| Special provisions | IB3, T7, TP1, TP28 |
| Packaging exceptions | 154 |
| Packaging non bulk | 203 |
| Packaging bulk | 241 |

Supplemental Information: This Product Concentrate is corrosive only to Aluminum. Per 49CFR 173.154(d)(1) Except for a hazardous substance, a hazardous waste, or a marine pollutant, a material classed as Class 8 Packing Group III, solely because of its corrosive effect on aluminum - is not subject to any other requirements of this subchapter when transported by motor vehicle or rail car in packaging that will not react or be degraded by the corrosive material.

IATA

| | |
|-------------------------------------|---|
| UN number | UN3267 |
| UN proper shipping name | Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | No. |
| ERG Code | 8L |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling. |
| Other information | |
| Passenger and cargo aircraft | Allowed. |
| Cargo aircraft only | Allowed. |

IMDG

| | |
|-------------------------------------|---|
| UN number | UN3267 |
| UN proper shipping name | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | No. |
| EmS | F-A, S-B |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling. |

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

DOT



IATA; IMDG



15. Regulatory information

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|--|--|
| US federal regulations | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. It may be reportable under the provisions of SARA Sections 311 and 312 if specific threshold criteria are met or exceeded. All components are on the U.S. EPA TSCA Inventory List. |
| TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) | |
| HEXAHYDRO-1,3,5-TRIS (2-HYDROXYETHYL)-S-TRIAZINE (CAS 4719-04-4) | 1.0 % One-Time Export Notification only. |
| CERCLA Hazardous Substance List (40 CFR 302.4) | |
| Not listed. | |

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

Product is a hazardous substance as defined under the OSHA Hazard Communication Standard and may be reportable under the provisions of SARA Sections 311 and 312.

US. Massachusetts RTK - Substance List

MONOETHANOLAMINE (CAS 141-43-5)
 TRIETHANOLAMINE (CAS 102-71-6)

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

MONOETHANOLAMINE (CAS 141-43-5)
 TRIETHANOLAMINE (CAS 102-71-6)

US. Rhode Island RTK

Not regulated.

California South Coast Air Quality Management District (SCAQMD) Rule 1144 (VOC Emissions)

This product is subject to SCAQMD Rule 1144; it is compliant and may be sold and used in the SCAQMD. The VOC content of the product is 56 g/L, measured by ASTM Method E-1868-10. This product has a specified use dilution VOC limit of 75 g/L, the maximum dilution concentration is 100 % to maintain compliance.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

| Country(s) or region | Inventory name | On inventory or exempt (yes/no)* |
|-----------------------------|--|----------------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | No |
| Canada | Non-Domestic Substances List (NDSL) | Yes |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision

| | |
|-----------------------------|--|
| Issue date | 07-31-2014 |
| Version # | 01 |
| Further information | Not available. |
| References | ACGIH NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents |
| Disclaimer | The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. |
| Revision Information | Product and Company Identification: Product and Company Identification Hazards Identification: US Hazard Categories Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Transport Information: Proper Shipping Name/Packing Group Regulatory Information: United States Material Attributes & Uses; Experimental Data: Experimental Data HazReg Data: North America GHS: Classification |