OXYVINYLs® OXYCHLOR® - 8 CATALYSTS

SDS No.: M41827  Rev. Date: 26-Oct-2020

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification: Occidental Chemical Corporation
14555 Dallas Parkway; Suite 400
Dallas, Texas 75254-4300

24 Hour Emergency Telephone Number: 1-800-733-3665 (USA); CANUTEC (Canada): 1-613-996-6666; CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186

To Request an SDS: MSDS@oxy.com or 1-972-404-3245
Customer Service: 1-800-752-5151 or 1-972-404-3700
Product Identifier: OXYVINYLs® OXYCHLOR® - 8 CATALYSTS
Trade Name: OxyVinyls® OxyChlor® 8, OxyVinyls® OxyChlor® 8 Coarse, OxyVinyls® OxyChlor® 8H, OxyVinyls® OxyChlor® 8H Coarse, OxyVinyls® OxyChlor® 8HT

Synonyms: Supported copper dichloride catalyst
Product Use: Oxychlorination catalyst; Industrial catalyst
Restrictions on Use (United States): FOR INDUSTRIAL USE ONLY.
Other Global Restrictions on Use: CATALYST FOR INDUSTRIAL USE ONLY.
SECTION 2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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EMERGENCY OVERVIEW:

Color: Yellow to brown
Physical State: Solid
Appearance: Powder
Odor: Odorless
Signal Word: DANGER

MAJOR HEALTH HAZARDS: HARMFUL IF INHALED OR SWALLOWED. CAUSES SERIOUS EYE DAMAGE. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE ALLERGIC SKIN REACTION. THIS MATERIAL CONTAINS A COMPONENT THAT IS A POTENTIAL ENDOCRINE DISRUPTOR.

AQUATIC TOXICITY: VERY TOXIC TO AQUATIC LIFE, FOR ACUTE EXPOSURES. TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS, FOR CHRONIC EXPOSURES.

PRECAUTIONARY STATEMENTS: Do not breathe dust, fume, gas, mist, vapors, or spray. Wash skin and contaminated clothing thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye, and face protection. Avoid release to the environment.

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HAZARD CLASSIFICATION:

<table>
<thead>
<tr>
<th>GHS: CONTACT HAZARD - SKIN:</th>
<th>Category 1B - Causes severe skin burns and eye damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS: CONTACT HAZARD - EYE:</td>
<td>Category 1 - Causes serious eye damage</td>
</tr>
<tr>
<td>GHS: SENSITIZATION HAZARD:</td>
<td>Skin Sensitizer Category 1 - May cause an allergic skin reaction</td>
</tr>
<tr>
<td>GHS: ACUTE TOXICITY - INHALATION:</td>
<td>Category 4 - Harmful if inhaled</td>
</tr>
<tr>
<td>GHS: ACUTE TOXICITY - ORAL:</td>
<td>Category 4 - Harmful if swallowed</td>
</tr>
<tr>
<td>HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):</td>
<td>- AQUATIC TOXICITY - ACUTE: Category 1 (Very toxic to aquatic life)</td>
</tr>
<tr>
<td></td>
<td>- AQUATIC TOXICITY - CHRONIC: Category 2 (Toxic to aquatic life with long lasting effects)</td>
</tr>
</tbody>
</table>

GHS SYMBOL: Corrosive, Exclamation mark, Environmental hazard

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Print date: 26-Oct-2020
OXYVINYL® OXYCHLOR® - 8 CATALYSTS

GHS SIGNAL WORD: **DANGER**

**GHS HAZARD STATEMENTS:**

**GHS - Health Hazard Statement(s) -**
- Harmful if swallowed
- Causes severe skin burns and eye damage
- May cause an allergic skin reaction
- Harmful if inhaled

**Additional Hazards - GHS Hazards Not Otherwise Classified (HNOC):**
- **ACUTE AQUATIC HAZARD - CATEGORY 1:** Very toxic to aquatic life
- **CHRONIC AQUATIC HAZARD - CATEGORY 2:** Toxic to aquatic life with long lasting effects

**GHS - Precautionary Statement(s) - Prevention**
- Do not breathe dust, fume, gas, mist, vapors, or spray
- Wash skin and contaminated clothing thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves/protective clothing/eye protection/face protection
- Avoid release to the environment

**GHS - Precautionary Statement(s) - Response**
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell
- IF ON SKIN: Wash with plenty of water
- IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower
- If skin irritation or rash occurs: Get medical advice/attention
- Specific treatment for skin contact (see First Aid information in Section 4 of the SDS)
- Take off contaminated clothing and wash it before reuse
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF EXPOSED (skin/eye): Immediately call a POISON CENTER OR PHYSICIAN
- Collect spillage

**GHS - Precautionary Statement(s) - Storage**
- Store in a secure manner

**GHS - Precautionary Statement(s) - Disposal**
- Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

**Hazard Not Otherwise Classified (HNOC)-Health**
• May produce an allergic reaction, from exposure to one of the product components 
• Magnesium Chloride, one of the components in product formulation, is listed on The Endocrine Disruptors Exchange’s (TEDX) List of Potential Endocrine Disruptors database of chemicals with the potential to affect the endocrine system. Every chemical on the TEDX List has one or more verified citations published, accessible, primary scientific research demonstrating effects on the endocrine system

See Section 11: TOXICOLOGICAL INFORMATION

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Percent [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide</td>
<td>1344-28-1</td>
<td>67 - 94</td>
</tr>
<tr>
<td>Copper dichloride (CuCl2)</td>
<td>7447-39-4</td>
<td>7 - 15</td>
</tr>
<tr>
<td>Magnesium chloride (MgCl2)</td>
<td>7786-30-3</td>
<td>1 - 6</td>
</tr>
<tr>
<td>Proprietary Ingredient 2</td>
<td>None</td>
<td>1 - 6</td>
</tr>
<tr>
<td>Proprietary Ingredient 1</td>
<td>None</td>
<td>1 - 3</td>
</tr>
<tr>
<td>Proprietary Ingredient 3</td>
<td>None</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

INHALATION:  If inhaled and adverse effects occur, remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms of overexposure occur, get medical attention.

SKIN CONTACT: If on skin, wash with plenty of water. If skin irritation or rash occurs, get medical advice/attention. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower. Specific Treatment for skin sensitization: Follow clinical protocols for allergic dermatitis.

EYE CONTACT: If in eyes, immediately rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately contact a poison center, physician, or get medical attention.

INGESTION: If swallowed, immediately rinse mouth. If illness or adverse symptoms develop, seek medical attention. If large amounts are ingested, get medical advice/attention.

Most Important Symptoms/Effects (Acute and Delayed):

- **Acute Symptoms/Effects:**
  - **Inhalation (Breathing):** Respiratory System Effects: May irritate upper airways, cause coughing, difficulty breathing.
  - **Skin:** When this material contacts skin it may cause redness, irritation, itching, burning sensation, rash, hives (acute or delayed contact urticaria), and/or allergic contact dermatitis.
  - **Eye:** Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye-lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to internal eye structures.
The full extent of the injury may not be immediately apparent.

**Ingestion (Swallowing):** If ingested, may develop a metallic taste in mouth. Ingesting large quantities may cause pain, nausea, vomiting, diarrhea.

**Other Health Effects:** Exposure may cause blood disorder, hemolytic anemia.

**Protection of First-Aiders:** Avoid contact with skin and eyes. Avoid breathing dust. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

**Notes to Physician:** There is no specific antidote. Treatment is based upon symptomatic and supportive care (decontamination, vital functions). It may take 48-72 hours to assess the extent of an ocular burn.

**Interaction with Other Chemicals Which Enhance Toxicity:** None known.

**Medical Conditions Aggravated by Exposure:** May aggravate preexisting conditions such as eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin; and respiratory conditions including asthma and other breathing disorders. Individuals with impaired liver/kidney function may have increased susceptibility to excessive exposures. Individuals with pre-existing blood disorders may be severely affected by exposure.

### SECTION 5. FIRE-FIGHTING MEASURES

**Fire Hazard:** Negligible fire hazard. Under fire conditions, may produce irritating and/or toxic gases.

**Explosive properties:** This product is not combustible or explosive.

**Extinguishing Media:** Use agents appropriate for surrounding fire. Use water spray to keep containers cool. Do not get water inside container.

**Unsuitable Extinguishing Media:** No information available.

**Specific Hazards:** Fire will liberate toxic gases. Water stream may scatter material.

**Unusual Hazards:** Runoff may pollute waterways.

**Fire Fighting:** Wear complete fire service protective equipment, including full-face MSHA/NIOSH approved self-contained breathing apparatus. Keep unnecessary people away, isolate hazard area and deny entry. Move containers from the fire area if it is possible to do so without risk to personnel. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

**Hazardous Combustion Products:** Chlorine; Chlorine compounds; Hydrogen chloride; Metallic oxides

**Sensitivity to Mechanical Impact:** May react with acetylene gas to form shock sensitive solid.

**Sensitivity to Static Discharge:** Not sensitive.
SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** In damp air hydrochloric acid formation is possible. Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

**Personal Protective Equipment:** Cleanup personnel must wear proper protective equipment. See section 8 for information on personal protective equipment. For Unknown Concentrations or exposures above IDLH (Immediately Dangerous to Life or Health) - Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

**Emergency Procedures:** Prevent material and runoff from entering sewers and waterways if it can be done safely well ahead of the release. Cleanup personnel must wear proper protective equipment. Notify all downstream water users of possible contamination.

**Environmental Precautions:** Keep out of water supplies and sewers. Should not be released into the environment. Releases should be reported, if required, to appropriate regulatory agencies.

**Methods and Materials for Containment, Confinement, and/or Abatement:** Stop leak if possible without personal risk. Collect spilled material in appropriate container for disposal. Sweep up or vacuum small pieces and dusts, and place in appropriate container for disposal. Use methods to minimize generation of dust.

- **Recovery:** Dampen and scoop spilled material into clean, dedicated equipment. Reclaim for processing if possible.
- **Neutralization:** No additional information available.
- **Final Disposal:** Shovel dry material into suitable container. Recycle or dispose according to regulations. Runoff may pollute waterways. For waste disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

**Handling:**

**Precautions for Safe Handling:** Do not breathe dust, fume, gas, mist, vapors, or spray. Wash skin and
contaminated clothing thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace.

**Technical measures/precautions:** Ensure adequate ventilation. Provide appropriate exhaust ventilation at places where dust is formed.

**Other precautions:** Keep containers tightly closed when not in use or when empty. Minimize generation of dust.

**Prevention of contact:** Avoid contact with eyes, skin and clothing. Wear protective gloves, protective clothing, eye, and face protection. Avoid creation of dust or mist. Avoid release to the environment.

**Storage:**

**Safe Storage Conditions:** Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

**Technical measures:** Product should be stored in a cool (temperatures not to exceed 35°C), dry, well-ventilated area, segregated from incompatible chemicals. Refer to Sections 6 and 10 for additional information.

**Incompatible Substances:** Strong oxidizing agents, In damp air hydrochloric acid formation is possible.

**Packaging Material:** Suitable materials for containers include carbon steel (iron), low density polyethylene (LDPE) and high density polyethylene (HDPE).

**Additional Information:** Storage stability: Storage temperatures ≤ 35°C.

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**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**REGULATORY EXPOSURE LIMIT(S):**
Listed below for the product components that have regulatory occupational exposure limits (OEL's) established.

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA Final PEL TWA</th>
<th>OSHA Final PEL STEL</th>
<th>OSHA Final PEL Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide</td>
<td>15 mg/m³ (Total)</td>
<td>5 mg/m³ (Respirable)</td>
<td>-----</td>
</tr>
<tr>
<td>1344-28-1 (67 - 94 %)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OEL:** Occupational Exposure Limit; **OSHA:** United States Occupational Safety and Health Administration; **PEL:** Permissible Exposure Limit; **TWA:** Time Weighted Average; **STEL:** Short Term Exposure Limit

<table>
<thead>
<tr>
<th>Component</th>
<th>Canada - TWAs</th>
<th>Canada - STELs</th>
<th>Canada - Ceilings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide</td>
<td>Alberta - 10 mg/m³ (TWA)</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>1344-28-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NON-REGULATORY EXPOSURE LIMIT(S):
Listed below are the product components that have advisory (non-regulatory) occupational exposure limits (OEL’s) established.

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TWA</th>
<th>ACGIH STEL</th>
<th>ACGIH Ceiling</th>
<th>Skin Absorption - ACGIH</th>
<th>OSHA TWA (Vacated)</th>
<th>OSHA STEL (Vacated)</th>
<th>OSHA Ceiling (Vacated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide</td>
<td>1 mg/m³</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>10 mg/m³ (Total)</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Copper dichloride (CuCl2)</td>
<td>0.2 mg/m³fume1</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
</tbody>
</table>

- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL’s (vacated by 58 FR 35338, June 30, 1993).

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

ENGINEERING CONTROLS: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

**Eye Protection:** Wear safety glasses with side-shields. If eye contact is likely, wear chemical resistant safety goggles. Wear chemical safety goggles with a face shield to protect against eye and skin contact when appropriate. Provide an emergency eyewash fountain and quick drench shower in the immediate work area.

**Skin and Body Protection:** Wear protective clothing to minimize skin contact such as standard industrial work clothes or coveralls, safety footwear. Contaminated work clothing must not be allowed out of the workplace. Store work clothing separately. Wash contaminated clothing before reuse.

**Hand Protection:** Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove. Example of protective material include butyl rubber (0.7 mm) and nitrile rubber (0.4 mm).

**Protective Material Types:** Nitrile, Neoprene, Butyl rubber, Natural rubber, Tyvek®

**Respiratory Protection:** A NIOSH approved respirator with N95 (dust, mist, fume) filter cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face-piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.
HYGIENE MEASURES: Handle in accordance with good industrial hygiene and safety practices. Store work clothing separately. Good hygiene practices include but are not limited to: wearing suitable chemical resistant gloves; eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color:</td>
<td>Yellow to brown</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH:</td>
<td>3.5</td>
</tr>
<tr>
<td>Melting Point/Range:</td>
<td>498 °C</td>
</tr>
<tr>
<td>Freezing Point/Range:</td>
<td>Not applicable to solids</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density (air=1):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Density/Specific Gravity (water=1):</td>
<td>No data available</td>
</tr>
<tr>
<td>Bulk Density:</td>
<td>Approximately 1000 kg/m³</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>20 g/L @ 20°C</td>
</tr>
<tr>
<td>Auto-ignition Temperature:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>993 (°C)</td>
</tr>
<tr>
<td>Evaporation Rate (ether=1):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Lower Flammability Level (air):</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Upper Flammability Level (air):</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Not applicable to solids</td>
</tr>
</tbody>
</table>

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperature and pressure. The product is stable if stored and handled as prescribed/indicated.

Reactivity: Not reactive at normal temperature and pressure.

Possibility of Hazardous Reactions: May react with acetylene gas to form shock sensitive solid. Addition of water leads to increase in temperature. Reacts with water to form hydrogen chloride.

Conditions to Avoid (e.g., static discharge, shock, or vibration): Avoid temperatures above 150°C. Avoid humidity. Avoid dust formation. Avoid heat. If heated above thermal decomposition temperature, 200 °C, acrid vapors will be released.
Incompatible Substances: Strong oxidizing agents, In damp air hydrochloric acid formation is possible.

Hazardous Decomposition Products: Acids, Chlorine, Hydrogen chloride, Chlorine compounds, Metallic oxides.

Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:

ACUTE TOXICITY:

Eye contact: Causes serious eye damage. Eye exposure may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of eye. The full extent of the injury may not be immediately apparent.

Skin contact: May cause allergic skin reaction. Skin contact with this material may cause redness, irritation, burning sensation, rash, hives (acute or delayed contact urticarial), and/or allergic contact dermatitis.

Inhalation: May irritate upper airways, cause coughing, difficulty breathing.

Ingestion: Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Ingesting large quantities may cause pain, nausea, vomiting, diarrhea.

CHRONIC TOXICITY:

Repeated contact may cause allergic reactions in susceptible persons.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Respiratory System Effects: May irritate upper airways, cause coughing, difficulty breathing.

Skin: When this material contacts skin it may cause redness, irritation, itching, burning sensation, rash, hives (acute or delayed contact urticaria), and/or allergic contact dermatitis.

Eye: Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye-lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to internal eye structures. The full extent of the injury may not be immediately apparent.

Ingestion (Swallowing): If ingested, may develop a metallic taste in mouth. Ingesting large quantities may cause pain, nausea, vomiting, diarrhea.

Other Health Effects: Exposure may cause blood disorder, hemolytic anemia.

Interaction with Other Chemicals Which Enhance Toxicity: None known.

GHS HEALTH HAZARDS:

GHS: CONTACT HAZARD - SKIN: Category 1B - Causes severe skin burns and eye damage
GHS: CONTACT HAZARD - EYE: Category 1 - Causes serious eye damage
GHS: SENSITIZATION HAZARD: Skin Sensitizer Category 1 - May cause an allergic skin reaction
GHS: ACUTE TOXICITY - ORAL: Category 4 - Harmful if swallowed
GHS: ACUTE TOXICITY - INHALATION: Category 4 - Harmful if inhaled

TOXICITY DATA:

PRODUCT TOXICITY DATA:

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

COMPONENT TOXICITY DATA: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

<table>
<thead>
<tr>
<th>Component</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Alumina Oxide</td>
<td>&gt;5000 mg/kg (Rat)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Copper dichloride (CuCl2)</td>
<td>140 mg/kg (Rat)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Magnesium chloride (MgCl2)</td>
<td>2800 mg/kg (Rat)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Proprietary Ingredient 2</td>
<td>2111 mg/kg (Rat)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Proprietary Ingredient 1</td>
<td>2600 mg/kg (Rat)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Proprietary Ingredient 3</td>
<td>4184 mg/kg (Rat)</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

Eye Irritation/Corrosion: Causes serious eye damage. The product is classified as causing serious eye injury (Category 1, H318), according to criteria of the GHS.

Skin Irritation/Corrosion: Causes severe skin burns and eye damage. This product is classified as causing severe skin burns (Category 1, H314), according to GHS classification criteria.

Skin Absorbent / Dermal Route: NO.

RESPIRATORY OR SKIN SENSITIZATION: May produce an allergic skin reaction, from exposure to product component: lanthanum chloride, anhydrous.

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA. Not classified as a carcinogen per GHS criteria.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): The substance is not classified as a specific target organ toxicant after single exposure per GHS criteria.

SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure): The substance is not classified as a specific target organ toxicant upon repeated exposure per GHS criteria.

INHALATION HAZARD: HARMFUL IF INHALED.

GERM CELL/IN-VITRO MUTAGENICITY: Not classified as a mutagen per GHS criteria.

REPRODUCTIVE TOXICITY: Not classified as a reproductive toxin per GHS criteria.

ASPIRATION HAZARD: Not classified as an aspiration hazard per GHS criteria.

TOXICOKINETICS: Not available.
OXYVINYLs® OXYCHLOR® - 8 CATALYSTS

SDS No.: M41827  Rev. Date:  26-Oct-2020

METABOLISM: Not available.

ENDOCRINE DISRUPTOR: Magnesium Chloride, one of the components in product formulation, is listed on The Endocrine Disruptors Exchange’s (TEDX) List of Potential Endocrine Disruptors database of chemicals with the potential to affect the endocrine system. Every chemical on the TEDX List has one or more verified citations published, accessible, primary scientific research demonstrating effects on the endocrine system.

NEUROTOXICITY: No relevant information available.

IMMUNOTOXICITY: Not available.

Hazard Not Otherwise Classified (HNOC)-Health

• May produce an allergic reaction, from exposure to one of the product components
• Magnesium Chloride, one of the components in product formulation, is listed on The Endocrine Disruptors Exchange’s (TEDX) List of Potential Endocrine Disruptors database of chemicals with the potential to affect the endocrine system. Every chemical on the TEDX List has one or more verified citations published, accessible, primary scientific research demonstrating effects on the endocrine system

SECTION 12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Component:</th>
<th>Freshwater Fish:</th>
<th>Invertebrate Toxicity:</th>
<th>Algae Toxicity:</th>
<th>Other Toxicity:</th>
</tr>
</thead>
</table>
| Magnesium chloride (MgCl2) | *LC50 Pimephales promelas: 1970 - 3880 mg/L 96h static  
*LC50 Gambusia affinis: 4210 mg/L 96h static | *EC50 Daphnia magna: 140 mg/L 48h  
*EC50 Daphnia magna: 1400 mg/L 24h | *EC50 Desmodesmus subspicatus (72h) =2200 mg/L | No data available |
| Proprietary Ingredient 1 | *LC50 Lepomis macrochirus: 1060 mg/L 96h static  
*LC50 Pimephales promelas: 750 - 1020 mg/L 96h static | *EC50 Daphnia magna: 83 mg/L 48h  
*EC50 Daphnia magna: 825 mg/L 48h | *EC50 Desmodesmus subspicatus (72h) =2500 mg/L | No data available |

Fish Toxicity:
Copper dichloride: Various Species - LC50 0.035 mg/l (96 hr.)
Trade Secret Ingredient #2: Oncorhynchus mykiss - LC50 0.44 mg/l equivalent to 0, 13 mg/l Ce/L (96 hr.)

Invertebrate Toxicity:
Copper dichloride: Ceriodaphnia dubia - EC50 0.0344 mg/l
Trade Secret Ingredient #1: Daphnia sp. - EC50 2.083 mg/l (48 hr.)
Trade Secret Ingredient #2: Daphnia magna - EC50 6.9 mg/l (48 hr.)

FATE AND TRANSPORT:

PERSISTENCE: Metals may form insoluble salts in aquatic environments which may persist.
OXYVINYLS® OXYCHLOR® - 8 CATALYSTS

SDS No.: M41827  Rev. Date: 26-Oct-2020

BIODEGRADATION: This material is inorganic and not subject to biodegradation. The methods for determining the biological degradability are not applicable to inorganic substances.

BIOACCUMULATIVE POTENTIAL: An assessment of bioaccumulation potential suggests that this material may be accumulated in organisms.

MOBILITY IN SOIL: Adsorption to solid soil phase is expected.

ADDITIONAL ECOLOGICAL INFORMATION: This product is very toxic to fish and aquatic organisms. This product is toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from material:
Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations. Contact a licensed professional waste disposal service to dispose of surplus and non-recyclable solutions.

Container Management:
Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

Contaminated Material:
This SDS does not apply to used catalysts since used catalyst characteristics may be different than the virgin catalyst represented. Used catalyst may have different hazards than original product and will need to be tested prior to disposal. Contaminated packaging must be disposed of as unused product by a licensed / permitted waste disposal service.

SECTION 14. TRANSPORT INFORMATION

LAND TRANSPORT

<table>
<thead>
<tr>
<th>U.S. DOT 49 CFR 172.101:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN NUMBER:</td>
</tr>
<tr>
<td>UN3077</td>
</tr>
<tr>
<td>PROPER SHIPPING NAME:</td>
</tr>
<tr>
<td>Environmentally hazardous substance, solid, n.o.s. (Contains Copper Dichloride)</td>
</tr>
<tr>
<td>HAZARD CLASS/ DIVISION:</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>PACKING GROUP:</td>
</tr>
<tr>
<td>III</td>
</tr>
<tr>
<td>LABELING REQUIREMENTS:</td>
</tr>
<tr>
<td>9, EHSM</td>
</tr>
<tr>
<td>MARINE POLLUTANT:</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>DOT SEVERE MARINE POLLUTANT:</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
UN NUMBER: UN3077
SHIPPING NAME: Environmentally hazardous substance, solid, n.o.s. (Contains Copper Dichloride)
CLASS OR DIVISION: 9
PACKING/RISK GROUP: III
LABELING REQUIREMENTS: 9, EHSM

MARITIME TRANSPORT (IMO / IMDG)
UN NUMBER: UN3077
PROPER SHIPPING NAME: Environmentally hazardous substance, solid, n.o.s. (Contains Copper Dichloride)
HAZARD CLASS / DIVISION: 9
Packing Group: III
LABELING REQUIREMENTS: 9, EHSM
MARINE POLLUTANT: YES

AIR TRANSPORT (ICAO / IATA)
Special Instructions CAO: IATA Certificate for shipping personnel is required

SECTION 15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 426-2675.

<table>
<thead>
<tr>
<th>Component</th>
<th>U.S. DOT Hazardous Substances/ RQs</th>
<th>CERCLA Hazardous Substances / RQs</th>
<th>CERCLA Section 302 EHS EPCRA RQs</th>
<th>Section 302 Threshold Planning Quantity (TPQs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper dichloride (CuCl2)</td>
<td>10 lbs (RQ)</td>
<td>10 lb (final RQ)</td>
<td>Not listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

SARA EHS Chemical (40 CFR 355.30)
Not regulated.

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):
Acute Health Hazard

SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):
Health Hazard - Sensitizer (Respiratory or Skin)
Health Hazard - Serious eye damage or eye irritation
Health Hazard - Skin Corrosion or Irritation
Health Hazard - Acute Toxin (any route of exposure)

EPCRA SECTION 313 (40 CFR 372.65):
The following chemicals are listed in 40 CFR 372.65 and may be subject to Community Right-to-Know Reporting requirements.

<table>
<thead>
<tr>
<th>Component</th>
<th>SARA 313 - Emission Reporting</th>
<th>SARA 313 PBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide 1344-28-1 (67 - 94)</td>
<td>1.0% (de minimis concentration)</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF HOMELAND SECURITY (DHS)- Chemical Facility Anti-Terrorism Standards (6 CFR 27):**  
No components in this material are regulated under DHS.

**OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):**  
Not regulated.

**EPA’S CLEAN WATER AND CLEAN AIR ACTS:**  
Component(s) not listed on impacted regulatory lists.

### NATIONAL INVENTORY STATUS

#### U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA Inventory</th>
<th>TSCA ACTIVE LIST</th>
<th>TSCA 12(b)</th>
<th>TSCA - Section 4</th>
<th>TSCA - Section 5</th>
<th>TSCA - Section 6</th>
<th>TSCA - Section 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide 1344-28-1</td>
<td>Listed</td>
<td>ACTIVE</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Copper dichloride (CuCl2) 7447-39-4</td>
<td>Listed</td>
<td>ACTIVE</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Magnesium chloride (MgCl2) 7786-30-3</td>
<td>Listed</td>
<td>ACTIVE</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 2</td>
<td>Listed</td>
<td>ACTIVE</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 1</td>
<td>Listed</td>
<td>ACTIVE</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 3</td>
<td>Listed</td>
<td>ACTIVE</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**CANADIAN CHEMICAL INVENTORY:** All components of this product are listed on either the DSL or the NDSL.

<table>
<thead>
<tr>
<th>Component</th>
<th>DSL</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide 1344-28-1 (67 - 94)</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Copper dichloride (CuCl2) 7447-39-4 (7 - 15)</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Magnesium chloride (MgCl2) 7786-30-3 (1 - 6)</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 2 (1 - 6)</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 1 (1 - 3)</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 3 (1 - 5)</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

### STATE REGULATIONS

<table>
<thead>
<tr>
<th>Component</th>
<th>California Proposition 65</th>
<th>California Proposition 65 CRT</th>
<th>California Proposition 65 CRT</th>
<th>Massachusetts Right to Know Hazardous</th>
<th>Rhode Island Right to Know Hazardous</th>
</tr>
</thead>
</table>

Print date: 26-Oct-2020
# CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

<table>
<thead>
<tr>
<th>Component</th>
<th>Canada - CEPA - Schedule I - List of Toxic Substances</th>
<th>Canada - NPRI</th>
<th>Canada - CEPA - 2010 Greenhouse Gases (GHG) Subject to Mandatory Reporting</th>
<th>CANADIAN CHEMICAL INVENTORY:</th>
<th>NDSL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fibrous Alumina / Aluminum Oxide</td>
<td>Not listed</td>
<td>Part 1, Group 1 Substance</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Copper dichloride (CuCl2)</td>
<td>Not listed</td>
<td>Part 1, Group 1 Substance</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Magnesium chloride (MgCl2)</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 2</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 1</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Proprietary Ingredient 3</td>
<td>Not listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

## SECTION 16. OTHER INFORMATION

Prepared by: Occidental Chemical Corporation - HES&S Product Stewardship Department

Rev. Date: 15-Oct-2020

Print date: 26-Oct-2020
Reason for Revision:
• Scheduled review
• Change of company physical address: SEE SECTION 1
• Updated 24 Hour Emergency Telephone Number: SEE SECTION 1
• Added restrictions on use: See SECTION 1
• Emergency Overview was revised: SEE SECTION 2
• Added GHS Information: SEE SECTION 2
• GHS Symbol(s) added or changed: SEE SECTION 2
• Added or revised Precautionary Statements: SEE SECTION 2
• Added Hazards Not Otherwise Classified (HNOC): SEE SECTION 2
• COMPOSITION/INFORMATION ON INGREDIENTS (SECTION 3)
• FIRST AID MEASURES (SECTION 4)
• Modified Fire Fighting Measure Recommendations: SEE SECTION 5
• Revised Accidental Release Measures: SEE SECTION 6
• Revised Handling and Storage Recommendations: SEE SECTION 7
• EXPOSURE CONTROLS/PERSONAL PROTECTION (SECTION 8)
• Modified Exposure Limit information: SEE SECTION 8
• PHYSICAL AND CHEMICAL PROPERTIES (SECTION 9)
• SDS format change / enhancement to Section 11: Toxicological Information
• DISPOSAL CONSIDERATIONS (SECTION 13)
• Updated Transportation Information: SEE SECTION 14
• Added LOLI tables such as EPA'S Clean Water / Air Act, TSCA status, DHS, PSM, EPCRA, CERCLA, Federal Canadian: SEE SECTION 15
• Added SARA Hazard Categories Aligned with GHS (2018): SEE SECTION 15
• WHMIS Classifications were removed from format: SEE SECTION 15

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees.

End of Safety Data Sheet