**MATERIAL SAFETY DATA SHEET**

**SECTION 1 - PRODUCT IDENTIFICATION AND COMPANY INFORMATION**

**PRODUCT NAME:** XXX

**PRODUCT CLASS:** DYE NANOPARTICLE

**SUPPLIER:** Crysta-Lyn Chemical Company, Inc**.**

6 Emma St.

Binghamton, NY 13905

**Tel:** (607) 770-6096 **Fax:** (607) 729-3322

**EMERGENCY PHONE NUMBER:**

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident Call **CHEMTREC** Day or Night

DOMESTIC NORTH AMERICA **800-424-9300**

INTERNATIONAL, CALL 703-527-3887 (collect calls not accepted)

## SECTION 2 - HAZARDS IDENTIFICATION

**ROUTES OF ENTRY** Primary routes of entry are skin and inhalation.

**POTENTIAL HEALTH RISKS**

**EYES** Contact with eyes can cause irritation.

**SKIN** Prolonged contact with skin may cause irritation

**INHALATION** May be harmful if inhaled.

**INGESTION** Seek medical attention.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE** Persons with a history of skin sensitization problems should be careful and follow precautionary procedures when working in an area where this material is used. Chronic effects are unknown.

**SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **RECOMMENDED EXPOSURE LIMITS (PPM)1** | | | |
| **INGREDIENT NAME** | **CAS #** | **PERCENT BY WEIGHT** | **ACGIH TLV** | **OSHA PEL** | **VAPOR PRESS (mm Hg @20°C)** |
| Proprietary Resins | Proprietary | 31 - 59 | N/AV | N/AV | N/AV |
| CYCLOHEXANONE | 108-94-1 | 35 - 45 | 203 | 50 | 3.4 |
| PROPRIETARY DYES | Proprietary | 0.5 – 3 | NE | NE | NE |

*NA - Not applicable N/AV – Not available NE – Not established UNK – Unknown*

1 UNLESS NOTED OTHERWISE, LIMITS ARE PPM AND mm Hg AT 20 DEGREES CENTIGRADE, RESPECTIVELY, FOR EXPOSURE LIMITS AND VAPOR PRESSURES

2 RECOMMENDED BY MANUFACTURER

3 SKIN ABSORPTION MAY CONTRIBUTE TO THE OVERALL ABSORPTION OF THE MATERIAL.

APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ABSORPTION SO THAT THE TLV AND/OR PEL LIMITS ARE NOT INVALIDATED.

**SECTION 4 -EMERGENCY AND FIRST AID MEASURES**

***Primary routes of entry are dermal and inhalation****.*

**FOR SWALLOWING:** Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Consult physician or poison control center immediately. Treat symptomatically. Be prepared to provide the attending physician a copy of this document.

**FOR SKIN CONTACT:** Remove contaminated clothing. Wash thoroughly with mild soap and warm water. Consult a physician if there is persisting irritation.

**FOR INHALATION:** Remove victim to a well-ventilated area. Give oxygen or artificial respiration as required. Treat symptomatically and consult physician.

**FOR EYE CONTACT:** Contact with eyes can cause irritation. Flush with copious amounts of water for at least fifteen minutes. Consult physician for medical treatment, if necessary.

**SPECIAL NOTES TO ATTENDING PHYSICIAN:** There is no specific antidote.

Treatment of overexposure should be directed at control of symptoms and the clinical condition.

# **SECTION 5 - FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Carbon dioxide, powder, foam, and water spray/mist. Exposure to decomposition products may be a health hazard. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Dispose of run-off from firefighting in accordance with federal, state and local waste disposal ordinances.

**UNUSUAL FIRE/EXPLOSION HAZARDS:** None

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS:** Ensure suitable personal protection during removal of spillages.

**ENVIRONMENTAL PRECAUTIONS:** Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

**METHODS FOR CLEANING UP:** Avoid dusting. Clean up spillages. Transfer to a container for disposal. Wash the spillage area clean. Washing must be prevented from entering surface water drains.

**WASTE DISPOSAL:** This material must be disposed within accordance with federal, state, and local ordinances.

**SECTION 7 - HANDLING AND STORAGE**

**HANDLING:** Handle in well-ventilated areas. Avoid eye and skin contact. Avoid inhalation of dust. Smoking, eating and drinking should be prohibited in areas of storage and use. Good housekeeping standards are essential to avoid the exposure of all personnel and unreacted materials.

**STORAGE:** Keep containers tightly closed. Store ina dry, well-ventilated area away from sources of heat, ignition and direct sunlight. No smoking. Store separately from strong oxidizing agents, strong acids, and bases.

SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION

Skin and inhalation are the principal hazard. Persons with a history of skin sensitization problems should be careful and follow precautionary procedures when working in an area where this material is used.

**VENTILATION/RESPIRATION REQUIREMENTS:** Local exhaust recommended when appropriate to control exposure to dusts. NIOSH approved full faced respirator with APF of at least 10 when local exhaust (e.g. lab hood) is not available or in use.

**PROTECTIVE GLOVES:** Rubber, latex, or neoprene.

**EYE PROTECTION:** Safety glasses or goggles.

**ADDITIONAL SAFETY EQUIPMENT:** Impermeable aprons and boots along with safety shower and eye bath should be available

**HYGIENIC SAFETY PRACTICES:** Wash hands after handling compounds and before eating, using tobacco products or using the washroom and at the end of the day. Tobacco and food should be consumed in designated areas only.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Dark green powder.

**MELTING POINT:** >258°C

**BOILING RANGE:** N/A

**DENSITY:** N/AV.

**SOLUBILITY IN WATER:** Soluble

**VOC CONTENT OF MATERIAL:** Negligible

**VOC CONTENT MINUS WATER:** Negligible

**VAPOR DENSITY:** NA

**EVAPORATION RATE:** NA

**FLASH POINT:** NA

**EXPLOSIVE LIMITS:** Unknown

**EXTINGUISHING MEDIA:** CO2, dry chemical, water fog.

# **SECTION 10 - REACTIVITY/STABILITY**

**STABILITY AND REACTIVITY:** This product is stable under the recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

**CONDITIONS TO AVOID:** Avoid contact with strong acids, bases, and strong oxidizers. Dust generation.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Unknown.

**HAZARDOUS POLYMERIZATION:** will not occur.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**CHRONIC EFFECTS:** Toxicological studies of this compound have not been done. Chronic effects are unknown.

**ACUTE TOXICITY**

|  |  |  |
| --- | --- | --- |
| CAS# | **108-94-1 Cyclohexanone** |  |
| Inhalation, rat: LC50 | 8000 mg/l 4 h |  |
| Oral, rat: LD50 | 1900 mg/kg |  |
| Dermal, rabbit: LD50 | 948 mg/kg |  |
| Dermal, rat: LD50 |  |  |

**SWALLOWING**: This material may cause irritation of the digestive tract, nausea, vomiting, diarrhea, signs of nervous system depression (e/g. drowsiness, dizziness, loss of coordination, and fatigue). Aspiration hazard – this material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

**INHALATION**: vapors are irritating to nose and respiratory tract. Over exposure may result in headache, nausea, or vomiting, signs of nervous system depression. Vapors have an objectionable odor.

**SKIN CONTACT**: Prolonged and repeated over-exposure may result in redness, burning, defattening and dermatitis of skin.

**EYE CONTACT**: Can cause severe irritation, redness, tearing, and blurred vision.

**MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED BY OVEREXPOSURE**: Respiratory symptoms associated with pre-existing lung disorders (e.g. asthma-like conditions), sensitizations, or allergies.

**ADDITIONAL KNOWN HEALTH HAZ**ARDS: reports have associated prolonged and repeated occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**CARCINOGEN:** The components in this compound are not considered a carcinogen by OSHA, NTP, or IARC

**SECTION 12 - ECOLOGICAL INFORMATION**

No data on the product itself is available. The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Wastes, including empty containers should be disposed of in accordance with regulations made under the control of pollution act and the EPA. Contact a licensed professional waste disposal service to dispose of the material. Dispose of in accordance with your federal, state, and local authorities.

**SECTION 14 - TRANSPORTATION INFORMATION**

Transportation, storage and handling: avoid conditions listed in section 7. Protect against the inhalation of dust or particles.

DOT Classification: Not regulated IATA Classification: Regulated

UN Number: N/A UN Number: 1436

DOT Label: N/A UN Label: Zinc dust

Class: N/A Class: 4.3 (4.2)

Packing Group N/A Packing Group: N/A

## SECTION 15 - REGULATORY INFORMATION

This product is not regulated. This material is not hazardous in its purchased form. However, under RCRA, it is the product user’s responsibility to determine at the time of disposal if any material containing this product or derived from the product is a hazardous waste.

**TSCA**: LVE number L???? / Not listed??

Use Restrictions: IR Absorbing Dye for Imaging and Plates / R&D use only

This chemical is not subject to reporting requirements of section 311, 312, 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

## SECTION 16 - OTHER INFORMATION

HMIS® RATING HEALTH 2

FLAMMABILITY 0

REACTIVITY 0

Crysta-Lyn Chemical Company, Inc. makes no warranty, expressed or implied, as to the accuracy or reliability of information contained herein, except that such information is, to the best of our knowledge and belief, accurate as of the date indicated on this document. Crysta-Lyn Chemical Company, Inc. is not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of this product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health risks or hazards and should be used with caution. Crysta-Lyn Chemical Company, Inc. urges the customer receiving this MSDS to study it carefully to become aware of the hazards, if any. In the interest of safety, you should notify your employees, agents, contractors, etc. of the information on this sheet and make it available to anyone using this product and request your customers to inform their employees, customers and agents as well.

The information contained in this MSDS is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of this product and should not be construed as any guarantee of technical performance or suitability for particular applications.