MATERIAL SAFETY DATA SHEET

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SECTION 1 NAME & HAZARD SUMMARY

Material name: PROCION® ORANGE MX-2R (C.I. Reactive Orange 4)

1range 202

Hazard summary (as defined by OSHA Hazard Comm. Std., 29 CFR 1910.1200):

Physical hazards: None

*** Health hazards: Harmful pulmonary (lung) sensitizer

Read the entire MSDS for a more thorough evaluation of the hazards.

SECTION 2 INGREDIENTS

OSHA PEL

C.I. Reactive Orange 4 (CAS 70616-90-9)

Other ingredients

Not listed Not listed

Ingredients not precisely identified are proprietary or nonhazardous. Values are not product specifications.

SECTION 3 PHYSICAL DATA

Appearance and odor: Odorless powder

*** Melting point: No data

Vapor pressure (mm Hg at 20°C): No data

Vapor density (air = 1): No data

*** Solubility in water: 160 g/l

*** pH: 6.8 (at 10 g/l)

*** Specific gravity: No data

% Volatile by volume: Negligible

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

Flash point: Not applicable

Autoignition temperature: No data

Flammable limits (STP): Not applicable

*** Extinguishing media:

Water fog, alcohol foam, carbon dioxide, dry chemical, halogenated _agents.

Special fire fighting protective equipment:

Self-contained breathing apparatus with full facepiece and protective clothing.

Unusual fire and explosion hazards:

This product may form explosive dust clouds in air.

SECTION 5 REACTIVITY DATA

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing agents.

Hazardous decomposition products:

Combustion products: Carbon dioxide, carbon monoxide. Nitrogen oxides, ammonia. Sulfur oxides. Halogen, halogen acids, possible trace amounts of carbonyl halide.

Hazardous polymerization:

Will not occur.

SECTION 6 HEALTH HAZARD ASSESSMENT

General:

Limited toxicity data are available on this specific product; this health hazard assessment is based on the results of screening tests.

*** Ingestion:

The acute oral LD50 in rat is above 5,000 mg/kg. Relative to other materials, this material is classified as "practically nontoxic" by ingestion.

Eye contact:

This material is nonirritating in rabbit eye irritation studies; no irritation is likely to occur after human eye contact.

*** Skin contact:

This material is nonirritating in rabbit dermal irritation studies. No irritation is likely to develop following contact with human skin.

Skin absorption:

This product will probably not be absorbed through human skin.

Inhalation:

Although the potential for respiratory sensitization is expected to be low from exposures to dusts generated from this dyestuff, some individuals have developed respiratory allergic reactions after repeated and/or prolonged exposures to high atmospheric concentrations of dust from some reactive dyes, which is the type contained in this product. Cough, tightness in chest, and/or asthmatic wheezing may be signs of respiratory allergy.

Other effects of overexposure:

No other adverse clinical effects have been associated with exposures to this material.

First aid procedures:

Skin: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. ---continued---

SECTION 6 HEALTH HAZARD ASSESSMENT (continued)

First aid procedures (continued):

Eyes: Immediately flush with plenty of water for at least 15 minutes. redness, itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

Ingestion: Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by

mouth to an unconscious person.)

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is ** labored, give oxygen. Consult medical personnel. Note to physician: Persons with chronic pulmonary disease should receive a thorough medical evaluation before handling these dyestuff blends.

SECTION 7 SPILL OR LEAK PROCEDURES

*** Steps to be taken in case material is released or spilled: Wear respiratory protection during cleanup. Sweep up and recover or mix material with a moist absorbent and shovel into a chemical waste container. Cover container and remove from work area. Wash residue from spill area with water and flush to a sewer serviced by a wastewater treatment facility. Use care to minimize the amount of colored material that reaches the sewer.

Disposal method:

Discarded product is not a hazardous waste under RCRA, 40 CFR 261.

Container disposal:

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

SECTION 8 SPECIAL PROTECTION INFORMATION

TLV® or suggested control value:

No ACGIH TLV or OSHA PEL assigned. Minimize exposure in accordance with good hygiene practice.

*** Ventilation:

Use ventilation adequate to maintain safe levels.

If needed, use MSHA-NIOSH approved respirator for dusts, mists and fumes Respiratory protection: whose TLV is greater than 0.05 mg/m3.

Protective clothing:

Gloves, apron and arm covers to avoid skin contact (see Section 9).

*** Eye protection:

Safety glasses with side shields.

*** Other protective equipment:

Eyewash station in work area.

SECTION 9 SPECIAL PRECAUTIONS OR OTHER COMMENTS

*** Special precautions or other comments:

Follow procedures specified in the National Fire Protection Association Codes and Standards for handling combustible dusts. Maintain good housekeeping to avoid dust buildup. Avoid skin contact; stains may be difficult to remove without injuring the skin. Avoid breathing dusts. A sensitized individual should not be exposed to the product which caused the sensitization.

SECTION 10 REGULATORY INFORMATION

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710: All ingredients are on the TSCA Section 8(b) Inventory.

*** CERCLA and SARA Regulations (40 CFR 355, 370, and 372):

This product does not contain any chemicals subject to the reporting requirements of SARA Section 313.

*** State Regulations:

California Proposition 65: WARNING. This product contains a chemical known to the State of California to cause cancer.

The information herein is given in good faith but no warranty, expressed or implied, is made.

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***This line or section contains revisions or new statements since the last issue date.