

Hazardous mixture is subject to the PA Worker and Community Right-to-Know act.
This mixture or trade name product contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CHEMICAL IDENTITY

LABEL IDENTITY -	MSA P/N 096437 (463496) Hopcalite [®] Catalyst
CHEMICAL NAME/SYNONYMS-	Manganese dioxide and copper oxide mixture
FORMULA -	MnO ₂ -CuO
CAS REGISTRY NUMBERS-	1313-13-9 AND 1317-38-0
DOT HAZARD CLASS-	Not a hazardous material
TSCA INVENTORY STATUS-	All components appear on the Toxic Substances Control Act. (TSCA) Chemical Substances Inventory.
TITLE III CHEMICAL(S)-	Manganese dioxide, CAS Reg. No. 1313-13-9, concentration in mixture does not exceed 95 weight percent. Copper oxide, CAS Reg. No. 1317-38-0, concentration in mixture does not exceed 20 weight percent.

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM, ODOR-	Dark brown to black granules, odorless
STABILITY TO WATER AND AIR-	Deactivated by water, moisture in the air may reduce catalytic activity

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD -	Meets OSHA's criteria for an oxidizer
CONDITIONS OR MATERIALS TO AVOID -	Flammable gases, organic solvents, organics with easily oxidized functional groups
UNUSUAL FIRE & EXPLOSION HAZARDS -	Hopcalite [®] Catalyst is a non-flammable oxidizing agent; it reacts exothermally and may ignite certain organics.
FIRE EXTINGUISHER-	Use extinguishers appropriate to other materials involved.
SPECIAL FIRE FIGHTING PROCEDURES -	Wear pressure demand self-contained breathing apparatus with full face piece and full protective clothing. Disperse Hopcalite [®] Catalyst and soak with water to prevent reignition.

HEALTH HAZARDS

HEALTH HAZARDS -	Repeated inhalation for a period of a few months or longer may be harmful and may cause lung irritation or serious central nervous system disorders.
SIGNS AND SYMPTOMS OF EXPOSURE -	The symptoms of manganese dioxide poisoning are headache, weakness, sleeplessness, personality changes, hearing and vision problems, mental confusion. In the advanced stages, the symptoms are similar to those of Parkinsonism. Copper oxide may cause lung irritation.
PRIMARY ROUTES OF ENTRY -	Inhalation
TARGET ORGANS -	Central nervous system, lungs
MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE -	No Information
EXPOSURE LIMITS (OSHA PER, ACGIH TLV, OTHERS USED OR RECOMMENDED)-	OSHA Permissible Exposure Limit is 5 mg/m ³ (ceiling) for manganese and 0.1 mg/m ³ for copper oxide. The 1999 ACGIH Recommended Threshold Limit Value - Time Weighted Average (eight hours) is 0.2 mg/m ³ for manganese, as elemental Mn and inorganic compounds, and 1.0 mg/m ³ for copper dust and mist, as copper.
CARCINOGENICITY DATA -	No information; chemicals are not listed in National Toxicology Program (NTP) Annual Report on Carcinogens, not found to be potential carcinogens in the International Agency for Research on Cancer (IARC) Monographs, not listed by OSHA.
EMERGENCY & FIRST AID PROCEDURES -	Move personnel to fresh air. Call a physician.

SAFE HANDLING AND USE

HYGIENIC PRACTICES -	Use with adequate ventilation. Avoid breathing dust. Remove dust fines from air or wear recommended respirator.
PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT -	Wear recommended protective gear.
STORAGE -	Store in a dry place away from incompatible materials.
SPILL OR LEAK CLEANUP PROCEDURES-	Scoop into metal container. Cover loosely. Remove to waste handling area. Deactivate by soaking with water. Flush spill area with water.
WASTE DISPOSAL -	Dispose of according to local, state, and federal regulations.

CONTROL MEASURES

PERSONAL PROTECTIVE EQUIPMENT
WHEN EXPOSURE IS POSSIBLE-

Chemical protective goggles, NIOSH/MSHA approved filter-type respirator, rubber gloves, coveralls.

ENGINEERING CONTROLS -

Provide general and local ventilation. Exclude organic vapors from work area.

WORK PRACTICES -

Keep away from organic solvents and organics containing easily oxidized functional groups. Keep container closed; moisture may reduce the catalyst activity.

DATE OF PREPARATION -

Rev. 2, June 1999

WARNING: This is a hazardous chemical product. By following the directions and warnings provided with this product, the hazards associated with the use of this product can be greatly reduced but never entirely eliminated. Mine Safety Appliances Company makes no warranties, expressed or implied, with respect to this product and EXPRESSLY DISCLAIMS THE WARRANTY OF MERCHANTABILITY AND ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Users assume all risks in handling, using or storing this product.