MATERIAL SAFETY DATA SHEET

For R&D use only. Not for drug, household or other uses.

Click http://www.lookchem.com/cas-134/1344-43-0.html for suppliers of this product.

Composition/Information on Ingredient

Cas:
1344-43-0
Code:
T

RTECS:
OP0900000
Code:
T

Name:
MANGANESE OXIDE (MNO) 1 Environmental Wt: Othe

Other REC Limits:
N/P

OSHA PEL:
NOT ESTABLISHED
Code:
M

OSHA STEL:

Code:

ACGIH TLV:
NOT ESTABLISHED
Code:
M

ACGIHSTEL:
N/P
Code:

Control Measures

Respiratory Protection:
USE NIOSH APPROVED RESPIRABLE FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR WHEN WELDING IN CONFINED SPACE OR WHERE LOCAL EXHAUST OR VENTILATION DOES NOT KEEP EXPOSURE BELOW TLV. 5

Ventilation:
USE ENOUGH VENT, LOC EXHST AT ARC OR BOTH, TO KEEP FUMES & GASES BELOW TLV'S IN WORKER'S BRTHG ZONE & GEN AREA. TRAIN WELDER TO KEEP HIS/HER HEAD OUT OF FUMES.

Protective Gloves:
WELDER'S GLOVES.

Eye Protection:
ANSI APPRVD CHEM WORKERS GOGGS &FULL LENGTH FSHLD (FP N).

Other Protective Equipment:
Equipment WEAR HEAD, HAND &BODY PROT WHICH HELP PVNT INJURY FROM RADIA, SPKS &ELEC SHOCK. SEE ANSI Z49.1. AT MINIMUM, INCLS WELDER'S GLOVES &PROT FSHLD &MAY INCL ARM PROTECTORS, APRONS, HATS, (OTHER INFO)

Work Hygienic Practices:
N/P

Supplemental Safety and Health:
EFTS OF OVEREXP: CHRONIC FLUORIDE ABSORPTION CAN CAUSE SCLEROSIS OF BONES & MOTTLED TEETH. OVEREXP TO MANGANESE CMPDS MAY AFFECT CNS. SYMPS OF WHICH ARE LANGOUR, SLEEPINESS, MUSC WEAK, EMOTIONAL DISTU RBS & SPASTIC GAIT. OVEREXP TO RESPIRABLE CRYSTALINE SILICA MAY RSLT IN SILICOSIS, A DISABLING LUNG DISEASE.

Health Hazards Data

LD50/LC50Mixture:
N/P

Route Of Entry Inds - Inhalation:
YES

Skin:
YES

Ingestion:
YES

Carcinogenicity Inds - NTP:
YES

IARC:
YES

OSHA:
NO

Health Hazards Acute And Chronic:
ELEC ARC WORKING MAY CREATE ONE OR MORE OF FOLLOWING: FUMES & GASES CAN BE DANGEROUS TO HLTH. ELEC SHOCK CAN KILL. ARC RAYS CAN INJURE EYES & BURN SKIN. NOISE CAN DMG HEARING. ADDNL DETAILED DESCRIPTI ON OF HLTH & PHYSICAL HAZS & CONSEQUENCES MAY BE FOUND IN ESABS PUB FS2-529 "PRECS & SAFE PRACTS FOR ELEC WELDING & CUTTING" & F2035, "PRESC & SAFE PRACTS FOR GAS WELDING, CUTTING & HEATING." MAY BE OBTAINED FROM LOC SUPPLIER/WRITING MFR. ACUTE: FUME & DUST OVEREXP MAY INCL IRRIT OF EYES, I.

Explanation Of Carcinogenicity:
SILICA, CRYSTALLINE-QUARTZ: IARC MONOGRAPHS, VOL 68, 1997: GROUP 1. NTP 7TH ANNUAL REPORT ON CARCINOGENS, 1994:ANTICIPATED CARCINOGEN.

Signs And Symptions Of Overexposure:
HLTH HAZS: SUCH AS WATERY EYES, NOSE & THROAT IRRIT, HDCH, DIZZ, DFCLTY BRTHG, FREQUENT COUGH OR CHEST PAIN. DUST GENERATED FROM POURING/OTHERWISE HNDLG FLUX MAY ALSO CAUSE IRRIT OF EYES, LUNGS, NOSE & THROAT. INGEST OF BARIUM OXIDE CAN RSLT IN SEV PAIN, VOMIT, PARALYSIS & DEATH. CHRONIC OVEREXP TO AIR CONTAMINANTS MAY LEAD TO THEIR ACCUM IN LUNGS, CNDTN WHICH MAY BE SEEN AS DENSE AREAS ON CHEST X -RAYS. SEVERITY OF CHG IS PROPORTIONAL TO LENGTH OF EXPOS. CHGS SEEN ARE NOT NECESSARILY ASS

Medical Cond Aggravated By Exposure:
INDIVIDUALS W/ALLERGIES OR IMPAIRED RESP FUNC MAY HAVE SYMPS WORSENED BY EXPOS TO WELDING FUMES. HOWEVER, SUCH RXN CANNOT BE PREDICTED DUE TO VARIATION IN COMPOSITION & QTY OF DECOMP PRODS. 4

First Aid:
INGEST: CALL MD IMMEDIATELY (FP N). EYES: IMMEDIATELY FLUSH EYES W/POTABLE WATER FOR AT LEAST 15 MINUTES. SEEK ASSISTANCE FROM MD (FP N). SKIN: FLUSH W/COPIOUS AMOUNTS OF WATER. CALL MD (FP N). IN CA SE OF EMER, CALL FOR MED AID. EMPLOY FIRST AID TECHNIQUE RECOM BY RED CROSS. IF BRTHG IS DFCLT, GIVE OXYG & CALL MD. FOR ELEC SHOCK, DISCONNECT & TURN OFF POWER. IF NOT BRTHG, BEGIN ARTF RESP, PREF MO UTH-TO-MOUTH. IF NO DETECTABLE PULSE, BEGIN CPR. IMMED CALL MD. FOR ARC BURN, APPLY COLD, CL

Spill Release Procedures:
NOT APPLICABLE

Neutralizing Agent:
N/P

Waste Disposal Methods:
PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH FEDERAL, STATE AN D LOCAL REGULATIONS.

Handling And Storage Precautions:
READ & UNDERSTAND MFR'S INSTRUCTIONS & PRECAUTIONARY LABEL ON PRODUCT. SEE ANSI Z-49.1, "SAFETY IN WELDING & CUTTING," PUBLISHED BY AMERICAN WELDING SOCIETY, PO BOX 351040, MIAMI, FL 33135 & OSHA PUBL ICATION 2206 (29 CFR 1910), US GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402 FOR MORE DETAILS.

Other Precautions:
N/P

Fire and Explosion Hazard Information

Flash Point Method:
N/K

Flash Point:

Flash Point Text:
N/P

Autoignition Temp:

Autoignition Temp Text:
N/P

Lower Limits:

Upper Limits:

Extinguishing Media:
PRODUCT WILL NOT BURN. HOWEVER, WELDING ARCS & SPKS CAN IGNITE COMBUSTIBLE & FLAMMABLE MATERIALS. USE EXTINGUISHING MEDIA RECOMMENDED FOR BURNING MATERIALS & FIRE SITUATION.

Fire Fighting Procedures:
USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).

Unusual Fire/Explosion Hazard:
READ & UNDERSTAND MFR'S INSTRUCTIONS & PRECAUTIONARY LABEL ON PRODUCT. SEE ANSI Z-49.1, "SAFETY IN WELDING & CUTTING," PUBLISHED BY AMERICAN WELDING SOCIETY, PO BOX 351040, MIAMI, FL 33135 & OSHA PUBL ICATION 2206 (29 CFR 1910), US GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402 FOR MORE DETAILS.

Physical/Chemical Properties

HCC:

NRC/State LIC No:

Net Prop WT For Ammo:

Boiling Point:

B.P. Text:
N/P

Melt/Freeze Pt:

M.P/F.P Text:
N/P

Decomp Temp:

Decomp Text:
N/P

Vapor Pres:
N/P

Vapor Density:
N/P

Volatile Org Content %:

Spec Gravity:
N/P

VOC Pounds/Gallon:

PH: N/P

VOC Grams/Liter:

Viscosity:
N/P

Evaporation Rate & Reference:
N/P

Solubility in Water:
N/P

Appearance and Odor:
FUSED FLUXES ARE GRANULATED GLASS-LIKE PARTICLES, ODORLESS. BONDED (OTHER INFO)

Percent Volatiles by Volume:
N/P

Corrosion Rate:
N/P

Reactivity Data

Stability Indicator:
YES

Stability Condition To Avoid:
N/P

Materials To Avoid:
NONE CURRENTLY KNOWN.

Hazardous Decomposition Products:
WELDING FUMES &GASES CANNOT BE CLASSFIED SIMPLY. COMPOSITION &QTY OF BOTH DEPEND ON MATL BEING WORKED, PROCESS, PROCS &CONSUMABLES USED. OTHER CNDTNS WHICH 6 INFLUENCE COMPOSITION &QTY (OTHER INFO)

Hazardous Polymerization Indicator:
NO

Conditions To Avoid Polymerization:
N/P

Toxicological Information

Information:N/P

MSDS Transport Information

Information:N/P

Regulatory Information

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

Other Information:N/P

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