MATERIAL SAFETY DATA SHEET For R&D use only. Not for drug, household or other uses.

Composition/Information on Ingredient

USE NIOSH APPROVED SUPPLIED AIR RESPIRATORY PROTECTION OR RESPIRABLE FUME RESPIRATOR WHEN

WELDING, BRAZING OR SOLDERING IN CONFINED SPACE OR WHERE LOCAL EXHAUST OR VENTILATION DOES NOT

Equipment EYE WASH STATION, SAFETY SHOWER, HEAD, HAND &BODY PROTECTION TO PREVENT INJURY FROM

OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. DO NOT WEAR CONTAMINATED

TARGET ORGANS: LUNGS, CNS, EYES, SKIN. ACUTE- FUMES, GASES, DUSTS MAY CAUSE EYES, NOSE, THROAT, LUNGS IRRITATION. SOME TOXIC GASES MAY CAUSE PULMONARY EDEMA, ASPHYXIATION, DEATH. CHRONIC- ACCUMULATION OF IRON COMPOUNDS IN

IRRITATION, DIZZINESS, WATERY EYES, HEADACHE, NAUSEA, BREATHING DIFFICULTY, COUGHING, CHEST PAINS, FEVER, BODY ACHE,

PERSONS WITH IMPAIRED PULMONARY FUNCTION, AIRWAY DISEASES AND CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, CHRONIC

GET MEDICAL ATTENTION IF SYMPTOMS PERSIST. EMPLOY FIRST AID TECHNIQUE RECOMMENDED BY RED CROSS. IF BREATHING IS DIFFICULT, PROVIDE OXYGEN AND CALL PHYSICIAN. PROVIDE CPR IF NEEDED. FOR ELECTRIC SHOCK, DISCONNECT POWER. FOR ARC

PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. KEEP PERSONNEL AWAY. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE W ITH LOCAL, STATE AND

AVOID BREATHING OF FUMES. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING AND

USE CHEMICAL OR SAND FOR MOLTEN METALS. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY. 4

WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED

THIS PRODUCT WILL NOT BURN. HOWEVER, WELDING ARC AND SPARKS CAN IGNITE COMBUSTIBLE AND FLAMMABLE MATERIALS.

LUNGS, REDUCED LUNG FUNCTION/DISEASE. MANGANESE COMPOUNDS MAY AFFECT CENTRAL NERVOUS SYSTEM.

CHILLS. ARC RAYS CAN INJURE EYES & BURN SKIN. ELECTRIC SHOCK CAN KILL. IR RADIATION CAN INJURE EYES.

BURNS, APPLYCOLD, CLEAN COMPRESSES AND CALL A PHYSICIAN. INGESTION IS UNLIKELY.

IN SOLID FORM THIS MATERIAL POSES NO SPECIAL CLEAN-UP PROBLEMS.

Fire and Explosion Hazard Information

USE GENERAL & LOCAL EXHAUST AT FLAME TO KEEP FUMES AND GASES BELOW TLV'S IN THE WORKER'S BREATHING

Click http://www.lookchem.com/cas-133/1332-58-7.html for suppliers of this product.

Cas:

1332-58-7 Code: Μ

RTECS:

Code: М

Name:

GF1670500

Other REC Limits:

15 MG/M3 TDUST

OSHA PEL:

OSHA STEL:

ACGIH TLV:

ACGIHSTEL:

Ventilation:

2 MG/M3 TDUST; 9596

Control Measures

KEEP EXPOSURE B ELOW TLV.

FLAME-PROOF WELDING GLOVES WHEN WELDING

HELMET/FACE SHIELD WITH DARK FILTER LENS

RADIATION, SPARKS & ELECTRIC SHOCK.

ZONE & GENERAL AREA.

Other Protective Equipment:

Work Hygienic Practices:

Supplemental Safety and Health:

Health Hazards Data

LD50 (ORAL RAT) IS UNKNOWN

Carcinogenicity Inds - NTP:

Health Hazards Acute And Chronic:

Explanation Of Carcinogenicity:

Signs And Symptions Of Overexposure:

Medical Cond Aggravated By Exposure:

CONTAINS QUARTZ. SKIN CANCER HAS BEEN REPORTED, PER MSDS.

BRONCHITIS, ETC... CAN BE AGGRAVATED BY THE EXPOSURE.

Route Of Entry Inds - Inhalation:

Protective Gloves:

Eye Protection:

CLOTHING.

LD50LC50Mixture:

NΡ

Skin: NO

IARC: YES

OSHA: NO

First Aid:

Spill Release Procedures:

Waste Disposal Methods:

FEDERAL REGULATIONS.

Other Precautions:

Flash Point Method:

N/P

NONE

N/R

HCC: N1

NRC/State LIC No: NOT RELEVENT

Boiling Point:

Melt/Freeze Pt:

M.P/F.P Text: UNKNOWN

Decomp Temp:

Decomp Text: UNKNOWN

Vapor Pres:

Vapor Density:

Spec Gravity: UNKNOWN

PH: N/R

Viscosity: **NOT RELEVANT**

NOT RELEVENT

INSOLUBLE

N/R

N/R

YES

ACIDS

NO

Solubility in Water:

Corrosion Rate:

Stability Indicator:

Materials To Avoid:

WELDING ARCS

NOT RELEVANT

Information:N/P

Information:N/P

Appearance and Odor:

SOLID, WELDING ELECTRODE 5

Percent Volatiles by Volume:

Reactivity Data

Stability Condition To Avoid:

Hazardous Decomposition Products:

Hazardous Polymerization Indicator:

Conditions To Avoid Polymerization:

Toxicological Information

Regulatory Information

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

www.lookchem.com

Other Information:N/P

MSDS Transport Information

PRIMARILY IRON OXIDE, SECONDARILY COMPLEX OXIDES OF MANGANESE, POTASSIUM, SILICON, SODIUM AND TITANIUM

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any

guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from

handling or from contact with the above product. See reverse side of invoice or packing slip for additional

WARRANTY

terms and conditions of sale.

VOC Pounds/Gallon:

VOC Grams/Liter:

Evaporation Rate & Reference:

Volatile Org Content %:

N/R

B.P. Text:

Net Prop WT For Ammo:

Flash Point:

Flash Point Text:

Autoignition Temp:

Lower Limits: NOT RELEVANT

Upper Limits: NOT RELEVANT

Extinguishing Media:

Fire Fighting Procedures:

IN THE POSITIVE PRESSURE MODE.

Physical/Chemical Properties

Unusual Fire/Explosion Hazard:

Autoignition Temp Text:

Handling And Storage Precautions: STORE IN DRY AREA AWAY FROM ACIDS.

DRINKING. KEEP OUT OF REACH OF CHILDREN.

Neutralizing Agent: NOT RELEVENT

Ingestion: NO 3

Respiratory Protection:

Code:

Code:

Code: M

Code:

М

NONE RECOMMENDED

MINERAL SILICATES/KAOLIN