METCO DIVISION -- WHITE ALUMINA POWDER, 105SF -- 3439-01-329-5393

Product ID:WHITE ALUMINA POWDER, 105SF MSDS Date:01/18/1988 FSC:3439 NIIN:01-329-5393 **MSDS Number: BPZNK** === Responsible Party === Company Name: METCO DIVISION Address:1101 PROSPECT AVENUE City:WESTBURY State:NY ZIP:11590 Country:US Info Phone Num:516-334-1300 Emergency Phone Num:516-824-2315 CAGE: FO765 === Contractor Identification === Company Name: METCO DIVISION Address:1101 PROSPECT AVENUE City:WESTBURY State:NY ZIP:11590 Phone: (516) 334-1300 CAGE:FO765 Company Name: METCO INC, SUB OF THE PERKIN-ELMER CORP Address:1101 PROSPECT AVENUE Box:City:WESTBURY State:NY ZIP:11590-2724 Country:US Phone:516-334-1300 CAGE:39918

Ingred Name:ALPHA-ALUMINA (ALUMINUM OXIDE) CAS:1344-28-1 RTECS #:BD1200000 OSHA PEL:15 MG/M3 TDUST ACG IH TLV:10 MG/M3 TDUST; 9293

Ingred Name:SILICA, CRYSTALLINE - TRIDYMITE; (SILICON DIOXIDE) CAS:15468-32-3 RTECS #:VV7335000 OSHA PEL:SEE TABLE Z3 ACGIH TLV:0.05 MG/M3 RDUST9293

LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER. Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO Health Hazards Acute and Chronic: ALUMINUM: SOME RECORD OF LUNG DMG DUE TO INHAL OF FI NELY DIVIDED ALUMINUM OXIDE PARTICLES. HOWEVER, EFT (KNOWN AS SHAVERS DISEASE) IS COMPLICATED BY PRESENCE IN INHALED AIR OF SILICA & OXIDES OF IRON; A NUISANCE PARTICULATE. ALUMINUM ALONE NOT GENERALLY REGARDED AS INDUSTRIAL POISON. INHAL OF FINELY (EFTS OF OVEREXP) Explanation of Carcinogenicity: CRYSTALLINE SILICA TRIDYMITE- GROUP 2A (IARC), ANTICIPATED TO BE A CARCINOGEN (NTP) Effects of Overexposure:HLTH HAZ:DIVIDED ALUMINUM POWDER HAS BEEN REPORTED AS A CAUSE OF PREL IMINARY FIBROSIS. MAY BE IMPLICATED BY ALZHEIMERS DISEASE. SILICON: DOES NOT OCCUR FREE IN NATURE, BUT IS

FORMED AS SILICON DIOXIDE (SILICA) & AS VARIOUS SILICATES. EYE:POSS IRRIT. SKIN:POSS DERMATITIS. INHAL:RESP IRRIT. INGEST:NOT APPLICABLE.

First Aid:EYE:FLOOD W/WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, CALL MD. SKIN:WASH W/SOAP & WATER TO REMOVE POWDER. IF IRRITATION PERSISTS, CALL MD. INHAL:EXPOSE TO FRESH AIR. INGEST:CONSULT MD.

Flash Point:NONE Extinguishing Media:USE CLASS D FIRE EXTINGUISHER. Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT . Unusual Fire/Explosion Hazard:MODERATE FIRE HAZARD IN THE FORM OF DUST WHEN EXPOSED TO FLAME.

Spill Release Procedures: MATERIAL SPILLED ONTO FLOOR

MAY BECOME AIRBORNE BY NORMAL PLANT ACTIVITY. GOOD HOUSEKEEPING, BY SWEEPING AREA CLEAN IS NECESSSARY TO REMOVE MATERIALS FROM BECOMING A SOURCE OF AIR CONTAMINATION. Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER. Handling and Storage Precautions: AVOID EXCESSIVE SKIN CONTACT AND ORAL INGESTION. Other Precautions: CHLORINATED HYDROCARBON VAPORS PRESENT NEAR PLASMA FLAME MAY BE DECOMPOSED TO PHOSGENE. ADEQ EXHAUST SYSTEM REQUIRED TO AVOID EFT OF DUST, FUMES & MIST WHICH MAY BE GENERATED BY THERMAL SPRAYING. DO NO T PERMIT SPRAY DUST TO ENTER (SUPP DATA) Respiratory Protection: NIOSH/MSHA APPROVED RESPIRATOR FOR DUST, FUMES, MISTS SHOULD BE WORN AT ALL TIMES DURING THERMAL SPRAY PROCESS TO PROTECT OPERATOR FROM DUST & FUMES. Ventilation: VENTILATION EQUIPMENT DESIGNED TO CREATE AN AIR VELOCITY OF 200 FPM.

Protec

tive Gloves: ALUMINIZED DURING PLASMA SPRAY PROCESS.

Eye Protection: FOLLOWING LENS SHADES RECOMM (SUPP DATA)

Other Protective Equipment: ALUMINIZED APRON DURING PLASMA SPRAY PROCESS.EAR PROT WHEN SUBJECTED TO EXCESSIVE NOISE LEVELS. EYE WASH

STATION RECOMM.

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

OTHER PREC:EYES, MOUTH, CUTS, SCRATCHES OR OPEN WOUNDS. EYE PROT:FOR PROCESS INDICATED:COMBUSTION SPRAYING SHADE #5, PLASMA SPRAYING UP TO 40

KW SHADE #9, 40-60 KW SHADE #10 AND GREATER THAN 60 KW SHA DE #11.

Melt/Freeze Pt:M.P/F.P Text:3500-4000 Spec Gravity:1.3-1.7 Solubility in Water:NEGLIGIBLE Appearance and Odor:POWDER; NO ODOR.

Stability Indicator/Materials to Avoid:YES HOT CHLORINATED RUBBER. Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER. Hazardous Decomposition Products

## :OZONE & NITRIC OXIDE ARE FORMED BY PLASMA FLAME (INDEPENDENT OF POWDER; SIMILAR TO WELDING FUMES). Conditions to Avoid Polymerization:AVOID EXCEEDING TLV LIMIT OF 30 MG/M3 & 0.2 MG/M3 FOR NITRIC OXIDE & OZONE RESPECTIVELY.

Waste Disposal Methods:DISPOSE OF I/A/W FEDERAL, STATE AND LOCAL REGULATIONS .

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