

METCO INC, SUB OF THE PERKIN-ELMER CORP -- METCO 201B-NS-1 ZIRCONIUM OXIDE POWDER
-- 3439-01-391-8640

===== Product Identification =====

Product ID:METCO 201B-NS-1 ZIRCONIUM OXIDE POWDER
MSDS Date:05/05/1993
FSC:3439
NIIN:01-391-8640
MSDS Number: BYSHV
=== Responsible Party ===
Company Name:METCO INC, SUB OF THE PERKIN-ELMER CORP
Address:1101 PROSPECT AVENUE
City:WESTBURY
State:NY
ZIP:11590-272
4
Country:US
Info Phone Num:516-334-1300
Emergency Phone Num:202-483-7616/800-424-9300(CHEMTREC)
CAGE:39918
=== Contractor Identification ===
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

===== Composition/Information on Ingredients =====

Ingred Name:ZIRCONIUM OXIDE
CAS:1314-23-4
RTECS #:ZH8800000
Fraction by Wt: 91.5%
Other REC Limits:NONE RECOMMENDED

Ingre

d Name:CALCIUM CARBONATE (MARBLE) (LIMESTONE)

CAS:1317-65-3

RTECS #:EV9580000

Fraction by Wt: 5.0%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3 TDUST; 9495

Ingred Name:ORGANIC BINDER

Fraction by Wt: 1.0%

Other REC Limits:NONE RECOMMENDED

Ingred Name:HAFNIUM OXIDE

CAS:12055-23-1

Fraction by Wt: 2.0%

Other REC Limits:NONE RECOMMENDED

Ingred Name:SILICON (II) OXIDE

CAS:10097-28-6

Fraction by Wt: 0.5%

Other REC Limits:NONE RECOMMENDED

=====
s Identification =====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:ZIRCONIUM OXIDE:INHAL/SKIN

HAZ.NUISANCE DUST.IRRIT RESP TRACT.SKIN IRRIT,SKIN

GRANULOMAS.CALCIUM CARBONATE:INHAL/EYE HAZ.LUNG/EYE IRRIT.ORG

BINDER:MILDLY TOXIC BY INGEST.GENERAL PUPOSE FOOD ADDITIVE.HAFNIUM

OXIDE:SKIN/EYE/INHAL HAZ.RESP TRACT IRRIT,SK

IN/EYE MILD

IRRIT.SILICON OXIDE:INHAL/EYE HAZ.RESP TRACT IRRIT,(SUPPL)

Effects of Overexposure:POSSIBLE EYE IRRIT, POSSIBLE SKIN IRRIT, INHAL

IRRIT, POSSIBLE INGEST IRRIT.

Medical Cond Aggravated by Exposure:CONSULT PHYSICIAN. TARGET

ORGANS:RESP TRACT, SKIN, LUNGS, EYES, GASTROINTESTINAL TRACT.

=====
First Aid Measures =====

First Aid:EYE:FLUSH W/WATER.IF IRRIT PERSISTS CONSULT PHYSICIAN.

SKIN:WASH W/SOAP/WATER. INHAL:EXPOSE TO FRESH AIR.CO

CONSULT PHYSICIAN

IF IRRIT OR RESPIRATORY DISTRESS PERSISTS. INGEST:CONSULT
PHYSICIAN.

===== Fire Fighting Measures =====

Extinguishing Media:NON-FLAMMABLE.

Fire Fighting Procedures:NONE.

Unusual Fire/Explosion Hazard:IF IGNITED, CALCIUM CARBONATE MAY PRODUCE
CARBON MONOXIDE/CARBON DIOXIDE.

===== Accidental Release Measures =====

Spill Release Procedures:VACUUM LOOSE POWDER ONLY W/VACUUMS EQUIPPED
W/HEPA FILTRATION.

VACUUMS APPROPRIATE FOR USE W/METALLIC DUSTS

SHOULD BE UTILIZED. WIPE AREA CLEAN. DO NOT USE WATER FOR CLEAN UP
OPERATIONS. DO NOT DRY SWEEP. AVOID GENERATING AIRBORNE DUST.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:STORE AWAY FROM INCOMPATIBLES.STORE
PROD CONTNRS IN WELL-VENTI,CLEAN,COOL,DRY AREA.STORE IN MANNER TO
MINIMIZE PUNCTURES/BREAKAGE OF CNTNRS.

Other Precautions:

AVOID INGEST/INHAL/EXCESSIVE SKIN CONTACT.AVOID

CONTACT OF POWDER W/WATER/OXIDIZERS.GOGG:COMBUST SPRAY

SHADE#5,PLASMA SPRAY UP TO 40KW SHADE#9,40-60KW SHADE#10,>60KW

SHADE#11.GOGG MAY BE APPROPRIATE TO AVOID EYE IRRIT DURING OTHER
PROD HNDL

===== Exposure Controls/Personal Protection =====

Respiratory Protection:RESPIRATOR APPROVED BY NIOSH W/FILTER CARTRIDGES
APPROVED FOR DUST/FUME/MISTS SHOULD BE WORN AT ALL TIMES DURING
THERMAL SPRAY PROCESS TO

PROTECT OPERATOR FROM EXPOSURE TO

DUST/FUMES.RESP MAY ALSO BE WORN WHEN PRODUCT HANDLING GENERATES
DUST.

Ventilation:PRODUCT SHOULD BE USED W/APPROPRIATE LOCAL EXHAUST
VENTILATION PROVIDED.

Protective Gloves:ALUMINIZED GLOVE-PLASMA SPRAY,RUBBER-OTHER

Eye Protection:(SEE OTHER PRECAUTION SECTION OF MSDS.)

Other Protective Equipment:EAR PROT-EXCESS NOISE LEVELS.AL APRON-PLASMA
SPRAY PROCESS.OTHER APPRO PROT CLOTH AS NECESSARY-PROD HANDLING EXCESS
SKIN(SUPP)

Work Hygienic Practices:WASH HANDS

AFTER HANDLING.

Supplemental Safety and Health

HAZ DECOMP PROD:POWDER.ORG BINDER EMIT TOX NA₂O FUMES WHEN HEAT TO DECOMP. HEA HAZ:SILICOSIS,PULM FIB(INTERSTITIAL CHANGES ON XRAY EXAM,SHORT OF BREATH,COUGH,DECR CHEST EXPAN,LESS WORK CAP,INCRE SUSC TO TUBERCULOSIS)CONJ,EYE IRRIT. OTH PROT EQPT:CONTACT,EYEWASH STATION,WASH FACI.

===== Physical/Chemical Properties =====

HCC:N1

Melt/Freeze Pt:M.P/F.P Text:4500F,2482C

Spec Gravity:2.1

Solubility in Water:NEGATIVE.

IVE.

Appearance and Odor:POWDER, NO ODOR.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

OXIDIZERS,ACIDS,SULFUR,NI(NO₃)₂,COMBUST.SODIUM OXIDE IN ORGANIC BINDER VERY REACTIVE-COMBINES WITH WATER TO FORM NAOH.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:OZONE & NITRIC OXIDE ARE FORMED BY PLASMA FLAME(SIMILAR TO WELDING FUMES).THIS ACTION IS INDEPENDENT OF CERAMIC (SUPPORT)

===

===== Disposal Considerations =====

Waste Disposal Methods:EMPTY PRODUCT CONTAINERS/PRODUCT WASTE/CLEANING MEDIA SHOULD BE STORED & DISPOSED OF ACCORDING TO APPROPRIATE LOCAL/STATE/FED REGULATORY GUIDELINES.

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be

accurate and

disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.