

PRAXAIR SURFACE TECHNOLOGIES INC -- ZRO-182 PRODUCT CODE: 063029-05 --  
3439-01-426-6648

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

Product ID:ZRO-182 PRODUCT CODE: 063029-05

MSDS Date:08/12/1993

FSC:3439

NIIN:01-426-6648

Status Code:A

MSDS Number: CJXFG

=== Responsible Party ===

Company Name:PRAXAIR SURFACE TECHNOLOGIES INC

Address:1555 MAIN STREET

City:INDIANAPOLIS

State:IN

ZIP:46224-3283

Country:US

Inf

o Phone Num:317-240-2650

Emergency Phone Num:(800)424-9300

Preparer's Name:MICHELLE ALEXANDER

Chemtec Ind/Phone:(800)424-9300

CAGE:0FGH2

=== Contractor Identification ===

Company Name:PRAXAIR SURFACE TECHNOLOGIES INC

Address:1555 MAIN STREET

Box:City:INDIANAPOLIS

State:IN

ZIP:46224-3283

Country:US

Phone:317-240-2650

CAGE:0FGH2

Company Name:STARGHILL TECHNOLOGIES CORP

Address:3850 OAKMAN BLVD

Box:City:DETROIT

State:MI

ZIP:48204-1119

Country:US

Phone:313-933-4141

Contract Num:SP0450-95-D-4037

CAG

E:0VYG8

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Composition/Information on Ingredients  
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Ingred Name:YTTRIUM OXIDE

CAS:1314-36-9

RTECS #:ZG3850000

Minumum % Wt:5.

Maxumum % Wt:20.

Ingred Name:ZIRCONIUM OXIDE

CAS:1314-23-4

RTECS #:ZH8800000

> Wt:75.

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Hazards Identification  
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LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

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

Health Hazards Acute and C

hronic:SKIN:MAY CAUSE ALLERGIC DERMATITIS,

WITH REDNESS & PAPULAR FORMATION IN SUSCEPTABLE INDIVIDUALS. MAY CAUSE ULCERS PROGRESSING TO DRY & SCALY SKIN, FEVER. EYE:MAY CAUSE IRRIATATION, EXPERIENCED AS REDN ESS & EXCESS REDNESS OF THE CONJUCTIVA. SWALLOWING: MAY CAUSE NAUSEA, ABDOMINAL PAIN, VOMITING, DIARRHEA, CENTRAL NERVOUS SYSTEM DEPRESSION, & BURNING SENSATION. INHALATION:MAY CAUSE RESPIRATORY TRACT IRRITATION, WITH CHEST PAIN, VOIMITING, DIARRHEA, BURNING SENS

ATION, & CENTRAL NERVOUS

SYSTEM DEPRESSION. MAY ALSO CAUSE INTERSTITIAL PNEUMONITIS & SENSITIZATION OF THE RESPIRATORY TRACT IN SUSCEPTIB LE PERSONS.

Explanation of Carcinogenicity:NONE CURRRENTLY KNOWN.

Effects of Overexposure:MAY CAUSE SENSITIZATION IN SUSCEPTABLE

INDIVIDUALS. CHRONIC EXPOSURE TO THE EYE CAN CAUSE CORNEAL DAMAGE, POLYCYTHEMIA, HYPERPLASIA OF THE THYROID GLAND AND DAMAGE TO THE ALPHA CELLS OF THE PANCREAS. REPEATED INHALATION MAY CAUSE EMPHYSEMA OR PULM

ONARY FIBROTIC DISEASE. CHRONIC SKIN CONTACT MAY

SPREAD TO THE WHOLE BODY WITH LESIONS, ITCHING, SORENESS, BURNING SENSATION AND REDNESS.

Medical Cond Aggravated by Exposure:BREATHING OF DUST MAY AGGRAVATE

ASTHMA AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE. MAY ALSO AGGRAVATE AN EXISTING DERMATITIS.

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First Aid Measures  
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First Aid:SWALLOWING:GIVE AT LEAST 2 GLASSES OF MILK OR WATER. INDUCE VOMITING, UNLESS PATIENT IS UNCONSC

IOUS. CALL A PHYSICIAN.

SKIN:WASH THOROUGHLY WITH SOAP & WATER. INHALATION: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. OXYGEN MAY BE GIVEN IF NECESSARY. CALL A PHYSICIAN. EYES: FLUSH THOROUGHLY WITH PLENTY OF WATER. IF DISCOMFORT PERSISTS, SEEK MEDICAL ATTENTION. PREFERABLY AN OPTHALMOLOGIST. NOTES TO PHYSICIAN:THE HAZARDS OF THIS MATERIAL ARE MAINLY DUE TO ITS SENSITIZING AND MILD IRRITATING PROPERTIES. THERE IS NO SPECIFIC ANTIDOTE.

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

Flash Point:NONE

Upper Limits:0.00%

Extinguishing Media:USE SPECIAL DRY POWDER METAL EXTINGUISHING MATERIAL TO EXTINGUISH METAL FIRES. USE APPROPRIATE EXTINGUISHER FOR COMBUSTABLE MATERIALS THAT MAY BE IGNITED BY THE THERMAL SPRAY FLAME.

Fire Fighting Procedures:NONE SPECIFIED BY MANUFACTURER.

Unusual Fire/Explosion Hazard:NONE SPECIFIED BY MANUFACTURER.

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

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT TO PROTECT AGAINST HAZARDS AND DISPOSE OF PER WASTE DISPOSAL METHOD.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:NONE SPECIFIED BY MANUFACTURER.

Other Precautions:CAUTION: WHEN THERMAL SPRAYING - ELECTRICITY CAN CAUSE FATAL SHOCK! DO NOT TOUCH LIVE ELECTRICAL PARTS! ARC RAYS CAN BURN EYES AND SKIN! WEAR RECOMMENDED EYE AND BODY PROTECTION.

FUMES, GAS, AND DUST CAN HARM YOUR HEALTH. PROVIDE ENOUGH VENTILATION AND WEAR RESPIRATOR IF REQUIRED.

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

Respiratory Protection:DEPENDS UPON SPECIFIC USE, CONDITION, AND LOCATION. IF THERE IS DUSTINESS, WEAR RESPIRATOR SELECTED PER OSHA 1910.134, AND OSHA 29 CFR 1910.252 AND ANSI Z49.1.

Ventilation:LOCAL DUST PICK UP AND VENTILATION RECOMMENDED.

Protective Gloves:NOT REQUIRED.

Eye Protection:W

HEN DUSTY USE GOGGLES PER OSHA 1910.13

Other Protective Equipment:SEE ANSI Z49.1, ANSI Z87.1, ANSI Z88.2 FOR  
HELMETS, FACE SHIELDS AND GOGGLES.

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

NONE SPECIFIED BY MANUFACTURER.

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

HCC:N1

Boiling Pt:B.P. Text:NONE

Vapor Density:N/VOLATILE

Evaporation Rate & Reference:UNAVAILABLE

Appearance and Odor:CREAM COLOR POWDER

Percent Volatiles by

Volume:0

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

Stability Indicator/Materials to Avoid:YES

NONE KNOWN.

Stability Condition to Avoid:NONE KNOWN.

Hazardous Decomposition Products:WHEN THERMAL SPRAYING, WILL VARY WITH  
OPERATING CONDITIONS. REASONABLY EXPECTED DECOMPOSITION PRODUCTS OF  
NORMAL OPERATION FROM THIS THERMAL SPRAY POWDER INCLUDE OXIDES OF  
THE LISTED INGREDIENTS.

===== Toxicological Information =====

Toxicological

Information:NONE SPECIFIED BY MANUFACTURER.

===== Ecological Information =====

Ecological:NONE SPECIFIED BY MANUFACTURER.

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

Waste Disposal Methods:DISPOSE OF WASTE PER LOCAL, STATE, AND FEDERAL  
REGULATIONS.

===== MSDS Transport Information =====

Transport Information:NONE SPECIFIED BY MANUFACTURER.

===== Regulatory Information =====

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SARA Title III Information:PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 AND OF 40 CFR 372: NONE.

Federal Regulatory Information:ALL COMPONENTS OF THIS PRODUCTS ARE LISTED IN TSCA.

State Regulatory Information:CALIFORNIA PROPOSITION 65 (CARCINOGEN): NONE. CALIFORNIA PROPOSITION 65 (TERATOGENIC): NONE. CALIFORNIA PROPOSITION 65 (BOTH TERATOGEN IC AND CARCINOGEN): NONE.

===== Other Information =====

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