

PRAXAIR SURFACE TECHNOLOGIES INC -- CRC-108, PRODUCT CODE: 012008-05 --
3439-01-421-0170

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

Product ID:CRC-108, PRODUCT CODE: 012008-05
MSDS Date:01/22/1992
FSC:3439
NIIN:01-421-0170
Status Code:A
MSDS Number: CJWNV
=== Responsible Party ===
Company Name:PRAXAIR SURFACE TECHNOLOGIES INC
Address:1555 MAIN STREET
City:INDIANAPOLIS
State:IN
ZIP:46224-3283
Country:US

Info Phone Num:317-240-2650
Emergency Phone Num:(800)424-9300
Preparer's Name:DELMAR BEIGHT
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
CAGE

:0VYG8

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Composition/Information on Ingredients
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Ingred Name:CHROMIUM

CAS:7440-47-3

RTECS #:GB4200000

Minumum % Wt:50.

Maxumum % Wt:75.

OSHA PEL:1 MG/M3

ACGIH TLV:0.5 MG/M3

EPA Rpt Qty:1 LB

DOT Rpt Qty:1 LB

Ingred Name:NICKEL

CAS:7440-02-0

RTECS #:QR5950000

Minumum % Wt:20.

Maxumum % Wt:50.

OSHA PEL:1 MG/M3

ACGIH TLV:1 MG/M3

Ingred Name:CARBON

CAS:7440-44-0

RTECS #:FF5250000

Minumum % Wt:5.

Maxumum % Wt:20.

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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:YES IARC:YES OSHA:YES

Health Hazards Acute and Chronic: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, AB

DOMINAL PAIN, VOMITING,
DIARRHEA, CENTRAL NERVOUS SYSTEM DEPRESSION, & BURNING SENSATION.
INHALATION:MAY CAUSE RESPIRATORY TRACT IRRITATION, WITH CHEST
PAIN, VOIMITING, DIARRHEA, BURNING SENSATION, & CENTRAL NERVOUS
SYSTEM DEPRESSION. MAY ALSO CAUSE INTERSTITIAL PNEUMONITIS &
SENSITIZATION OF THE RESPIRATORY TRACT IN SUSCEPTIB LE PERSONS.

Explanation of Carcinogenicity:NICKEL AND CHROMIUM HAVE BEEN DETERMINED
TO CAUSE CANCER IN EXPERMENTAL ANIMALS(IARC, NTP). NICKEL IS L

ISTED

AS A PROBABLE HUMAN CARCINOGEN. CHROMIUM IS LISTED AS A HUMAN CARCINOGEN. CHRONIC ECZEMA/NE URODERMATITIS FROM NICKEL DOES NOT REQUIRE CONTINUOUS METAL CONTACT.

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 PULMONARY FIBROTIC DISEASE. CHRONIC S

KIN 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.

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

First Aid:SWALLOWING:GIVE AT LEAST 2 GLASSES OF MILK OR WATER. INDUCE VOMITING, UNLESS PATIENT IS UNCONSCIOUS. CALL A PHYSICIAN.

SKIN:

WASH THOROUGHLY WITH SOAP & WATER. INHALATIO: REMOVE TO FRESH AIR. GIVE ARTI FICIAL 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 ATTENTIONL.PREFERABLYAN OPHTHALMOLOGIST. NOTES TO PHYSCIAN:THE HAZARDS OF THIS MATERIAL ARE MAINLY DUE TO ITS SENSITIZING AND MILD IRRITATING PROPERTIES. THERE IS NO SPECIFIC ANTIDOTE.

===== Fire Fighting Measu
res =====

Flash Point:NONE

Upper Limits:0.00%

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

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 ELECTRICALPARTS! 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:WHEN 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:DUSTY DARK GRAY 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 MANUFACT

URER.

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Ecological Information
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Ecological:NONE SPECIFIED BY MANUFACTURER.

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

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MSDS Transport Information
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Transport Information:NONE SPECIFIED BY MANUFACTURER.

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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: CHROMIUM, CAS# 7440-47-3,