

PRAXAIR SURFACE TECHN,SPEC POWDERS BUSINESS -- PC:036064-05 NI-164/NI-211 --
3439-01-211-6522

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

Product ID:PC:036064-05 NI-164/NI-211

MSDS Date:01/22/1992

FSC:3439

NIIN:01-211-6522

MSDS Number: CDGBC

=== Responsible Party ===

Company Name:PRAXAIR SURFACE TECHN,SPEC POWDERS BUSINESS

Address:1555 MAIN STREET

City:INDIANAPOLIS

State:IN

ZIP:46224

Country:US

Info Phone Num:317-240-2650

Emergency Phone Num:800-424-9300(CHEMTREC)/317-
240-2209

Preparer's Name:DELMAR BEIGHT

CAGE:GO132

=== Contractor Identification ===

Company Name:PRAXAIR SURFACE TECHNOL INC SPECIALTY POWDERS BUSI

Address:1555 MAIN STREET

City:INDIANAPOLIS

State:IN

ZIP:46224-3283

Country:US

Phone:317-240-2650

CAGE:GO132

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

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

Ingred Name:NIC

KEL (SARA 313) (CERCLA)
CAS:7440-02-0
RTECS #:QR5950000
Fraction by Wt: 50-75%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9596

Ingred Name:CHROMIUM (SARA 313) (CERCLA)
CAS:7440-47-3
RTECS #:GB4200000
Fraction by Wt: 20-50%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:0.5 MG/M3; 9596
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:ALUMINUM (SARA 313)
CAS:7429-90-5
RTECS #:BD0330000
Fraction by Wt: 5-20%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3
DUST
ACGIH TLV:10 MG/M3 DUST; 9596

Ingred Name:YTTRIUM
CAS:7440-65-5
RTECS #:ZG2980000
Fraction by Wt: 1-5%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9596

Ingred Name:VOLITILE ORGANIC CONTENT AS LISTED ON MSDS, NONE.
RTECS #:9999999VC
Fraction by Wt: NA
Other REC Limits:NONE RECOMMENDED

===== Hazards Identification =====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Rep

orts of Carcinogenicity:NTP:YES IARC:YES OSHA:YES
Health Hazards Acute and Chronic:EYE:ALLERGIC DERM W/RED/PAPULAR
FORMATION IN SUSCEPTABLE INDIVIDUALS WHICH USUALLY OCCURS IN FOLDS
OF SKIN.ULCERS PROGRESSING TO DRY,SCALY
SKIN,FEVER.EYE:IRRIT,EXPERIENCED AS RED,EXCESS RED OF CONJUNC
.INGEST:NAU,ABD PAIN,VOMIT,DIARR,CNS DEPRESS,BURN SENS.INHAL:RESP
TRACT IRRIT,CHEST PAIN,VOMIT,DIARR,BURN SENS,CNS(SUPP)

Explanation of Carcinogenicity:PER MSDS:NI/CR CAUSE CANC IN EPERIMENTA
L

AMINALS(IARC,NTP)NI PROBABLE HUMAN CARC.CR HUMAN
CARC.IARC/NTP/OSHA:YES.

Effects of Overexposure:MAY CAUSE SENS IN SUSCEPTIBLE PEOPLE.CHRONIC
EYE EXPO:CORNEAL DMG,POLYCYTHEMIA,HYPERPLASIA OF THYROID GLAND,DMG
TO ALPHA CELLS OF PANCREAS.REP INHAL EMPHYSEMA/PULM FIBROTIC
DISEASE.CHRONIC SKIN CONTAC T:MAY SPREAD TO WHOLE BODY
W/LESIONS,ITCHING,SORENESS,BURNING SENSATION & REDNESS.

Medical Cond Aggravated by Exposure:BREATHING OF DUST MAY AGGRAVATE
ASTHMA & INFLAMMATORY
OR FIBROTIC PULMONARY DISEASE. MAY ALSO
AGGRAVATE AN EXISTING DERMATITIS.

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

First Aid:INGEST:GIVE @LEAST 2 GLASSES OF MILK OR WATER.INDUCE VOMIT
UNLESS UNCONSC.CALL DR.SKIN:WASH THOROUGHLY
W/SOAP/WATER.INHAL:REMOVE TO FESH AIR.GIVE ARR RESP IF NOT
BREATH.OXY MAY BE GIVE IF NECESSARY.CA LL DR.EYE:FLUSH THOROUGHLY
W/PLENTY OF WATER.DISCOMFT PERSIST GET MED ATTN PREFER
OPHTHALMOLOGIST.DR:HAZ MAINLY DUE TO S
ENS/MILD IRRIT PROPERTIES.NO
SPEC ANTIDOTE.TREAT @CNTRL OF SYMPTOM/CLIN CONDITION

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

Flash Point:NONE
Autoignition Temp:Autoignition Temp Text:NP
Lower Limits:NP
Upper Limits:0
Extinguishing Media:SPECIAL DRY POWDER METAL EXT MATL TO EXT METAL
FIRE.USE APPROP EXT TO EXT COMBUST MATL THAT MAY IGN BY THERM SPRAY
FLAME
Fire Fighting Procedures:CONSULT/COMPLY W/ANSIZ49.1/NFPA 51B STD FOR
FIRE PREVENTION IN USE OF CUT

/WELD PROCESS.NFPA 51 FOR WELD/CUT &
NFPA 50 STDS FOR STORAGE/HDNLG LIQ PETRO GAS.
Unusual Fire/Explosion Hazard:AIRBORNE DUST PARTICLES ESPEC METAL
DUST,ACCUMULATION SHOULD BE TREATED AS EXPLO.MIN DANGER FROM DUST
EXPLO W/ADEQUA VENT PROVIDED TO SPRAY BOOTH IAW (SUPPLEMNT)

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

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT TO PROTECT AGAINST
HAZARDS & DISPOSE OF PER WASTE DISPOSAL METHOD.
Neutralizing Agent:NON
E SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:CAUT!THERM SPRAY-ELECTRICITY CAN CAUSE
FATAL SHOCK.DON'T TOUCH LIVE ELECT PARTS.ARC RAYS BURN
EYE/SKIN.WEAR RECOMMENDED EYE/BODY PROT.
Other Precautions:FUME/GAS/DUST HARM HEALTH.PROVIDE ENOUGH VENTI/WEAR
RESP.PERSONAL AIR SPL TAKEN/ANALYZE FOR HAZ INGR/DECOMPO PROD FOR
RESP TYP IF NECESSARY.BEF USE REFER AWS PUBLICATION"THERM SPRAY
PRAC/THEORY/A
PPLIC "/MSDS/MENTIONED PUBLICATION.ALWAYS(SUP)

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

Respiratory Protection:DEPENDS UPON SPECIFIC USE,CONDITION,LOCATION.IF
THERE IS DUSTINESS,WEAR RESPIRATOR SELECTED PER OSHA 1910.134 &
1910.252 & ANSI Z49.1.
Ventilation:LOCAL DUST PICK UP & 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,GOGGLES.
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
FIRE/EXPLO:AWSC2.1-73 & ACGIH PUBLICATION-INDUSTRIAL VENTI.
HEALTH:DEPRESS.INTERSTITIAL PNEUITIS,SENS OF RESP TRACT IN
SUSCEPTIBLE INDIVIDUALS. OTHER PRECAUT:SPRAY W/ENOUGH
VENTI.ARC/SPARKS DURING SPR AY CAN BE IGN SOURCE FOR COMBUST
PROD.PREVENT FIRES.REFER:NFPA 51B.

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

HCC:N1
Boiling Pt:B.P. Tex

t:NONE
Melt/Freeze Pt:M.P/F.P Text:NP
Decomp Temp:Decomp Text:NP
Vapor Pres:NP
Vapor Density:NON-VOLATI
Spec Gravity:2.40183
pH:NP
Viscosity:NP
Evaporation Rate & Reference:UNAVAILABLE.
Solubility in Water:NP
Appearance and Odor:DUSTY YELLOW GRAY POWDER.
Percent Volatiles by Volume:0
Corrosion Rate:NP

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

Stability Indicator/Materials to Avoid:YES
NONE KNOWN.
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.
Hazardous Decomposition Products:THERM SPRAY DECOMPO PROD VARY
W/OPERATING CONDITIONS.REASONABLY EXPECT:OXIDES,SUB-OXIDES,COMPLEX
OXIDES OF INGREDIENTS.

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

Waste Disposal Methods:DISPOSE OF WASTE PER LOCAL, STATE AND FEDERAL
REGULATIONS.CONTAINS SARA TITLE III SEC 313 CHEMICALS:NICKEL