

HI-TECH ALLOYS CORP -- HI-TECH -- 3439-00-004-4547

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

Product ID:HI-TECH
MSDS Date:01/01/1987
FSC:3439
NIIN:00-004-4547
MSDS Number: BKBJD
=== Responsible Party ===
Company Name:HI-TECH ALLOYS CORP
Address:25 WEST ST.
City:STAFFORD SPRINGS
State:CT
ZIP:06076
Country:US
Info Phone Num:203-684-6326
Emergency Phone Num:203-684-6326
CAGE:64576
=== Contractor Identifica
tion ===
Company Name:HI-TECH ALLOYS CORP
Address:47 CAPITAL DR
Box:City:WALLINGFORD
State:CT
ZIP:06492-2318
Country:US
CAGE:64576

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

Ingred Name:IRON
CAS:7439-89-6
RTECS #:NO4565500
Other REC Limits:10 MG/M3 FOR FE2O3

Ingred Name:CHROMIUM (SARA III)
CAS:7440-47-3
RTECS #:GB4200000
Other REC Limits:0.05 MG/M3 CR(VI)
OSHA PEL:1 MG/M3
ACGIH TLV:0.5 MG/M3; 9192
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:NICKEL (SARA III)
CAS

:7440-02-0
RTECS #:QR5950000
Other REC Limits:NONE SPECIFIED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9192

Ingred Name:MANGANESE (SARA III)
CAS:7439-96-5
RTECS #:OO9275000
Other REC Limits:1 MG/M3
OSHA PEL:(C) 5 MG/M3 DUST
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:SILICON
CAS:7440-21-3
RTECS #:VW0400000
Other REC Limits:3 MG/M3 AS SIO2
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9293

Ingred Name:MOLYBDENUM
CAS:7439-98-7
RTECS #:QA4680000
Other REC Limits:NONE SPECIFIED
OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3; 9293

Ingred Name:NIOBIUM
CAS:7440-03-1
Other REC Limits:5 MG/M3

Ingred Name:TITANIUM DIOXIDE
CAS:13463-67-7
RTECS #:XR2275000
Other REC Limits:NONE SPECIFIED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9293

Ingred Name:POTASSIUM TITANATE
CAS:12030-97-6
Other REC Limits:NONE SPECIFIED

Ingred Name:CALCIUM CARBONATE (MARBLE) (LIMESTONE)
CAS:1317-65-3
RTECS #:EV9580000
Other REC Limits:5 MG/M3 AS CAO
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9192

Ingred Name:F

LUORSPAR
CAS:14542-23-5
Other REC Limits:2.5 MG/M3 AS F

Ingred Name:SODIUM FLUOALUMINATE (CRYOLITE)
CAS:15096-52-3
RTECS #:WA9625000
Other REC Limits:2.5 MG/M3 AS F

Ingred Name:POTASSIUM ALUMINUM SILICATE (FELDSPAR)
CAS:68476-25-5
Other REC Limits:2 MG/M3

Ingred Name:POTASSIUM SILICATE
CAS:1312-76-1
Other REC Limits:5 MG/M3

Ingred Name:SODIUM SILICATE
CAS:1344-09-8
Other REC Limits:5 MG/M3

Ingred Name:POTASSIUM HYDROXIDE (SARA III)
CAS:1310-58-3
RTECS #:TT2100000
Other REC Limits:NONE SPEC
IFIED
OSHA PEL:C, 2 MG/M3
ACGIH TLV:C 2 MG/M3; 9192
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:SHORT TERM EXPOSURE TO WELDING FUMES,
GASES OR DUST MAY RESULT IN DISCOMFORT SUCH AS DIZZINESS, NAUSEA,
FEVER, DRYNESS AND/OR IRRITATION OF NOSE, THROAT AND EYES. SKIN
SENSITIVITY M
AY ALSO BE NOTED. LONG TERM EXPOSURE TO
FUMES/GASES/DUST MAY CAUSE PULMONARY IRRITATION OR PNEUMOCONIOSIS;
& SIDEROSIS FROM IRON FUMES.
Explanation of Carcinogenicity:NICKEL AND CHROMIUM ARE CONSIDERED
POSSIBLE CARCINOGENS UNDER OSHA. RESPIRATORY CANCER FROM WELDING IS
UNCONFIRMED.
Effects of Overexposure:EXPOSURE TO WELDING FUMES MAY RESULT IN
DISCOMFORT SUCH AS DIZZINESS, NAUSEA, FEVER, DRYNESS AND/OR
IRRITATION OF NOSE, THROAT AND EYES. SKIN SENSITIVITY MAY ALSO BE

NOTED. Watery eyes, headache, breathing difficulty, frequent coughing and/or chest pains may occur from acute exposure. Toxic gases can be fatal.

Medical Condition Aggravated by Exposure: Individuals with impaired pulmonary function or illness may have symptoms exacerbated by irritants contained in welding fumes.

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First Aid Measures
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First Aid: In case of electrical shock, turn off power prior to removal from exposure area and administration of first aid. Remove from exposure area and call for medical aid. Administer oxygen if breathing is difficult. If not breathing, begin artificial respiration. If no detectable pulse, begin external heart massage. Employ first aid techniques recommended by the American Red Cross.

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Fire Fighting Measures
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Extinguishing Media: Non-combustible. For surrounding fire use water, fog, carbon dioxide, foam, or dry chemical.

Fire

Fighting Procedures: Wear fire fighting protective equipment and a full faced self contained breathing apparatus. Cool fire exposed containers with water spray. Contain runoff.

Unusual Fire/Explosion Hazard: None. Welding procedures may produce hazardous decomposition products and fumes.

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Accidental Release Measures
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Spill Release Procedures: Clean up any grinding dust or waste residues and place in suitable DOT approved containers and dispose of in full compliance with federal, state and local regulations. Avoid inhalation and skin exposure.

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Handling and Storage
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Handling and Storage Precautions: Wear gloves and flame retardant clothing when cutting, grinding or welding. Do not expose skin to radiation when hot cutting or welding.

Other Precautions: Provide protective screens to shield others. When electrodes and fluxes are consumed, the fume and gas decomposition

PRODUCTS GENERATED ARE DIFFERENT IN FORM FROM THE INGREDIENTS LISTED. NEW COMPOUNDS NOT IN THE ELECTRODES MAY FORM.

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

Respiratory Protection:USE WELD FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR WHEN CUTTING, GRINDING OR WELDING IN A CONFINED SPACE OR WHERE LOCAL EXHAUST OR GENERAL VENTILATION DOES NOT KEEP EXPOSURE BELOW RECOMMENDED LIMITS. USE ONLY NIOSH APPROVED RESPIRATORS.

Ventilation:USE ENOUGH VENTILATI

ON WHEN CUTTING, GRINDING OR WELDING TO

KEEP THE DUST, FUMES & GASES FROM THE WORKERS BREATHING ZONE

Protective Gloves:FLAMEPROOF GAUNTLER GLOVES

Eye Protection:OSHA APPROVED GOGGLES/FACE SHIELD W/LENS

Other Protective Equipment:FLAME RETARDANT CLOTHING WHEN CUTTING, GRINDING OR WELDING. DO NOT EXPOSE SKIN TO RADIATION WHEN HOT CUTTING OR WELDING.

Work Hygienic Practices:WASH THOROUGHLY BEFORE EATING OR SMOKING.

LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

WELDING AND HOT CUTTING FUMES & GASES CANNOT BE CLASSIFIED SIMPLY. THEIR COMPOSITION AND QUANTITY ARE DEPENDENT ON THE METAL BEING WELDED, THE PROCEDURES, PROCESSES AND THE TYPE OF WIRE OR ELECTRODES USED. OTHER INFLUENCING FACTORS ARE THE PRESENCE OF CONTAMINANTS. CHLORINATED SOLVENTS MAY DECOMPOSE TO TOXIC GASES.

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

HCC:N1

Melt/Freeze Pt:M.P/F.P Text:2600F,1427C

Vapor Pres:NIL

Vapor Density:NIL

Spec Grav

ity:8

Solubility in Water:INSOLUBLE

Appearance and Odor:SOLID ODORLES METAL

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

Stability Indicator/Materials to Avoid:YES

STRONG ACIDS & ALKALIES.

Stability Condition to Avoid:NONE

Hazardous Decomposition Products:WELDING/CUTTING OPERATIONS MAY INCLUDE ELEMENTAL METALS, OXIDES OF THE METALS, FUMES/GASES & ELECTROMAGNETIC RADIATION.

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

Waste Disposal Method

s:DISPOSE I/A/W FEDERAL, STATE & LOCAL REGULATIONS

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