Product ID:SANDVIK MSDS Date:04/01/1991

FSC:3439

NIIN:01-164-5274

MSDS Number: BYDKK === Responsible Party ===

Company Name: SANDVIK INC WELDING AND WIRING DIVISION

Address: INTERSTATE 81 EXT 59

Box:1220

City:SCRANTON

State:PA

ZIP:18501-1220 Country:US

Info Phone Num:717-587-5191 FAX:717-586-8183

Emergency Phone Num:717-587-5191

CAGE:61005 === Contractor Id entification ===

Company Name: SANDVIK INC WELDING AND WIRING DIVISION

Address: INTERSTATE 81 EXT 59

Box:1220

City:SCRANTON

State:PA ZIP:18501 Country:US

Phone:717-587-5191

CAGE:61005

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

Ingred Name: CHROMIUM (SARA 313) (CERCLA)

CAS:7440-47-3

RTECS #:GB4200000 Fraction by Wt: 0 - 25%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:1 MG/M3

ACGIH TLV:0.5 MG/M3; 9495

EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB

Ingred Name: COPPER (SARA 313) (CERCLA)

CAS:7440-50-8

RTECS #:GL5325000 Fraction by Wt: 30 - 65%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:0.1MG/M3 FUME/1 DUST ACGIH TLV:0.2 MG/M3 FUME; 9495

EPA Rpt Qty:5000 LBS DOT Rpt Qty:5000 LBS

Ingred Name:IRON CAS:7439-89-6

RTECS #:NO4565500 Fraction by Wt: 1 - 5%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:10 MG/M3 (TDUST) ACGIH TLV:5 MG/M3 (OXIDE FUME)

Ingred Name: MANGANESE (SARA 313)

CAS:7439-96-5

RTECS #:009275000 Fraction by Wt: 1 - 5%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:C 5 MG/M3

DUST

ACGIH TLV:5 MG/M3 DUST 9495

Ingred Name: MOLYBDENUM

CAS:7439-98-7

RTECS #:QA4680000 Fraction by Wt: 1 - 10%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:10 PPM. ACGIH TLV:10 PPM.

Ingred Name: NICKEL (SARA 313) (CERCLA)

CAS:7440-02-0

RTECS #:QR5950000 Fraction by Wt: 30 - 65%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:1 MG/M3

ACGIH TLV:1 MG/M3; 9495

Ingred Name: NIOBIUM (ALSO CALLED COLUMBIUM)

CAS:7440-03-1

Fraction by Wt: 0 - 5%

Other REC Limits: NONE RECOMMENDED

Ingred Name:TITANIUM,

CAS:74

40-32-6 RTECS #:XR1700000 Fraction by Wt: 1 - 5% Other REC Limits: NONE RECOMMENDED Flash Point:NONFLAMMABLE Extinguishing Media: USE CHEMICAL OR SAND FOR MOLTEN METALS. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY. Fire Fighting Procedures: WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE MODE. Unusual Fire/Explosion Hazard:THI S PRODUCT IS NONREACTIVE. NONFLAMMABLE, NONEXPLOSIVE AND NONHAZARDOUS UNTIL WELDED. WELDING ARC AND SPARKS CAN IGNITE COMBUSTIBLE AND FLAMMABLE MATERIALS. ===== Exposure Controls/Personal Protection ======== Supplemental Safety and Health ========= Physical/Chemical Properties =========== HCC:N1 Evaporation Rate & Evaporation Release Reference: NOT RELEVENT

NRC/State Lic Num: NOT RELEVENT Viscosity: NOT RELEVANT Solubility in Water: INSOLUBLE Appearance and Odor:WELDING WIRE OR STRIP - ODORLESS

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

Stability Indicator/Materials to Avoid:YES STRONG ACIDS Stability Condition to Avoid:NONE

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