

## KANTHAL CORP -- KANTHAL D HEATING ELEMENT WIRE -- 9650-00N081432

## ===== Product Identification =====

Product ID:KANTHAL D HEATING ELEMENT WIRE

MSDS Date:01/08/1996

FSC:9650

NIIN:00N081432

MSDS Number: CGBHF

=== Responsible Party ===

Company Name:KANTHAL CORP

Address:119 WOOSTER ST

City:BETHEL

State:CT

ZIP:06801

Country:US

Info Phone Num:203-744-1440

Emergency Phone Num:203-744-1440

Preparer's Name:ROBERT WATSON

CAGE:18771

=== Contractor Identification ===

Company Name:KANTHAL CORP

Address:119 WOOSTER ST

Box:City:BETHEL

State:CT

ZIP:06801

Country:US

Phone:203-744-1440

CAGE:18771

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

Ingred Name:ALUMINUM; (AL) (SARA 313)

CAS:7429-90-5

RTECS #:BD0330000

Fraction by Wt: 4.5%

OSHA PEL:15 MG/M3 DUST

ACGIH TLV:10 MG/M3 DUST

Ingred Name:CHROMIUM; (CR) (SARA 313) (CERCLA)

CAS:7440-47-3

RTECS #:GB4200000

Fraction by Wt: 22%

OSHA PEL:1 MG/M3

ACGIH TLV:0.5 MG/M3

EPA Rpt Qty:1 LB

DOT Rpt Qty:1 LB

Ingred Name:IRON (III) OXIDE; (IRON (FE))

CAS:1309-37-1

RTECS #:NO7400000

Fraction by Wt: 73.5%

OSHA PEL:10 MG/M3 (FE)

ACGIH TLV:5 MG/M3 FUME (FE)

Ingred Name:SUPDAT:ARE GENRLY DIFF FROM INGS LISTED & MAY INCL OXIDES  
OF METALS, CHROMATES, FLUORIDES & COMPLEX METALLICS. (ING 5)

RTECS #:9999999ZZ

Ingred Name:ING 4:GASES MAY INCL CARBON MONOXIDE, OZONE & OXIDES OF  
NITROGEN. CHLORINATED SOLVS MAY BE DECOMPOSED BY THE ARC (ING 6)  
RTECS #:9999999ZZ

Ingred Name:ING 5:INTO TOX GASES SUCH AS PHOSGENE. FOLLOWING EXPOS LIMS  
APPLY TO THOSE FUME & GASES WHICH MAY BE FOUND IN (ING 7)  
RTECS #:9999999ZZ

Ingred Name:ING 6:WELDING/HIGH TEMP ENVIRON: ALUMINUM FUME (AL): TLV:5  
MG/M3; CARBON MONOXIDE (CO): PEL/TLV:50 PPM; CHROMIUM (ING 8)  
RTECS #:9999999ZZ

Ingred Name:ING 7:(CHROMATES): PEL:0.1 MG/M3, TLV:0.05 MG/M3; COBALT  
FUME (CO): PEL:0.1 MG/M3, TLV:0.05 MG/M3; COPPER FUME (ING 9)  
RTECS #:9999999ZZ

Ingred Name:ING 8:(CU): PEL: 0.1 MG/M3, TLV:0.2 MG/M3; FLUORIDES (AS  
F): PEL/TLV:2.5 MG/M3; IRON OXIDE FUME (AS FE): PEL: (ING 10)  
RTECS #:9999999ZZ

Ingred Name:ING 8:10 MG/M3, TLV:5 MG/M3; MANGANESE FUME (MN): PEL:5  
MG/M3, TLV:1 MG/M3; MOLYBDENUM (SOLUBLE) (MO): PEL/TLV: (ING 11)  
RTECS #:9999999ZZ

Ingred Name:ING 10:5 MG/M3; NICKEL(SOLUBLE) (NI): PEL:1 MG/M3, TLV:0.1  
MG/M3; NITROGEN DIOXIDES (NO\*2): PEL:5 PPM, TLV:3 PPM;(ING 12)  
RTECS #:9999999ZZ

Ingred Name:ING 11:OZONE (O3): PEL/TLV:0.1 PPM; PHOSGENE (COC12):  
PEL/TLV:0.1 PPM.  
RTECS #:9999999ZZ

Ingred Name:EFTS OF OVEREXP:OF CHROMIUM ALLOYS. RECENT EPIDEMIOLOGICAL  
STUDIES OF WORKERS MELTING & WORKING ALLOYS CNTNG (ING 14)  
RTECS #:9999999ZZ

Ingred Name:ING 13:CHROMIUM HAVE FOUND NO INCR RISK OF CANCER.  
NEVERTHELESS, EXPOS MUST BE MAINTAINED BELOW LEVELS SPECIFIED.  
RTECS #:9999999ZZ

Ingred Name:OTHER PREC:OF WELDING FUMES. IT IS ALSO REC THAT A  
PARTICULATE FILTER MASK BE USED WHENEVER GRINDING/WORKING (ING 16)  
RTECS #:9999999ZZ

Ingred Name:ING 15:MATL IN ANY WAY THAT PRDCES DUST/POWDER.  
IMPORTANT-DETERMINE ACTUAL EXPOSURE BY INDUSTRIAL HYGIENE  
MONITORING.  
RTECS #:9999999ZZ

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

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 Chronic:ACUTE:METALLIC TASTE; TIGHTNESS OF  
CHEST; FEVER; IRRIT OF EYES, NOSE, THROAT &/OR SKIN; LOSS OF  
CONSCIOUSNESS/DEATH DUE TO WELDING GASES/LACK OF OXYG.  
CHRONIC:ADVERSE EFTS MAY RSLT FROM LONG TIME EXPO S TO WELDING  
FUME, GASES/DUSTS. THESE EFTS MAY INCL SKIN SENSIT, NEUROLOGICAL  
DMG & RESP DISEASE SUCH (EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:HLTH HAZ:AS BRONCH ASTHMA, LUNG

FIBROSIS/PNEUMOCONIOSIS. CHROMIUM MUST BE CONSIDERED POSS CARCIN UNDER OSHA (29 CFR 1910.1200). CHROMIUM HAS BEEN LISTED BY IARC BECAUSE OF SUFFICIENT EVID FOR CARCIN O F CHROMIUM & CERTAIN CHROMIUM CMPDS. STUDIES FORMING BASIS FOR CONCLUSION WERE FROM OPERATIONS DIFF FROM PROD (ING 13)

Medical Cond Aggravated by Exposure:AGGRAVATION OF PREEXISTING RESPIRATORY OR ALLERGIC CONDITIONS MAY OCCUR IN SOME WORKERS.

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

First Aid:INGEST:CALL MD IMMEDIATELY . EYES:IMMEDIATELY FLUSH W/POTABLE WATER FOR A MINIMUM OF 15 MINUTES, SEEK ASSISTANCE FROM MD . SKIN:FLUSH W/COPIOUS AMOUNTS OF WATER. CALL MD . INHAL:REMO VE FROM EXPOSURE & OBTAIN PROMPT MEDICAL ATTENTION. IF VICTIM IS UNCONSCIOUS, ADMINISTER OXYGEN. IF NOT BREATHING RESUSCITATE IMMEDIATELY.

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

Flash Point:NONFLAMMABLE

Extinguishing Media:DRY CHEMICAL - USE DRY POWDER FOR METAL FIRES. GENTLY SPOON MEDIA ONTO FIRE. DO NOT DISTURB PARTICLES.

Fire Fighting Procedures:USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT .

Unusual Fire/Explosion Hazard:MATLS AS SUPPLIED ARE NONFLAMM; HOWEVER WELDING ARCS & SPKS CAN IGNITE FLAMM LIQ & VAPS & COMBUST SOLIDS. DUST HAZ EXISTS UNDER FAVORING CNDTNS OF SM (SUPDAT)

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

Spill Release Procedures:VACUUM CLEAN DUST (IF ANY) W/EQUIPMENT FITTED W/HEPA FILTER. IF SWEEPING IS NECESSARY USE A DUST SUPPRESSANT. STORE MATERIAL IN A SUITABLE CONTAINER.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:DO NOT EXPOSE SKIN. ALWAYS SEGREGATE MATLS BY MAJOR HAZ CLASS. ADEQ VENT WHEN WELDING/GRINDING. ALWAYS MAINTAIN EXPOS BELOW PEL/TLV.

Other Precautions:USE INDUSTRIAL MONITORING TO ENSURE THAT YOUR USE OF THIS MATL DOES NOT CREATE CNDTNS WHICH EXCEED PEL/TLV. LISTED MATLS AS SUPPLIED GENRLY PRESENTS NO HLTH HAZS. WHENEVER MATL IS WELDED PROPER VENT S HOULD BE PROVIDED TO AVOID INHAL(ING 15)

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

Respiratory Protection:NIOSH APPRVD RESP PROT IS NEC WHEN PELS MAY BE EXCEEDED (TYPICALLY MAY BE EXCEEDED DURING WELDING, CUTTING/GRINDING). USE NIOSH APPRVD AIR-SUPPLIED RESP IN CONFINED SPACES. USE ONLY NIOSH APPRVD RESPI RATORY PROTECTION EQUIPMENT.

Ventilation:USE VENT/LOC EXHST WHEN CUTTING, GRINDING/WELDING. MAINTAIN EXPOS BELOW LIMS. CONFINED SPACES REQ SPECIAL ATTN (SUPDAT)

Protective Gloves:IMPERVIOUS GLOVES .

Eye Protection:ANSI APPRVD CHEM WORKERS GOGGS &(SUPDAT)

Other Protective Equipment:ANSI APPRVD EYE WASH FOUNTAIN & DELUGE SHOWER . USE PROT CLTHG WHEN CUTTING, GRINDING/WELDING. WEAR FLAME (SUPDAT)

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

EXPLO HAZ:PARTICLE SIZE. DISPERSION IN AIR & STRONG IGNIT SOURCE MAY  
RSLT IN EXPLO. VENT:TO PROPER VENT. EYE PROT:FULL LGTH FSHLD .  
SELECT LENSE SHADE FROM AWS PUBLICATION F2.2. OTHER PROT EQUIP  
:RETARDANT CLTHG. HAZ DECOMP PROD:METALBEING WELDED, PROCESSES,  
PROCS & ELECTRODES USED. CONSTITUENTS OF FUME (ING 4)

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

Appearance and Odor:SOLID METALS SHAPED ON WIRE, ROD, TUBE, STRIP/SOME  
INTERMEDIATE FORM.

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

Stability Indicator/Materials to Avoid:YES

NONE SPECIFIED BY MANUFACTURER.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:FUMES & GASES FROM WELDING & HIGH TEMP  
CUTTING CANNOT BE CLASSIFIED SIMPLY. COMPOSITION & QTY OF BOTH  
DEPEND ON (SUPDAT)

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

Waste Disposal Methods:DISPOSAL MUST BE I/A/W FEDERAL, STATE & LOCAL  
REGULATIONS . DISPOSE OF I/A/W EPA OR LOCAL REGULATIONS.

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