



MATERIAL SAFETY DATA SHEET

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MSDS NUMBER: M5000-1

ISSUE DATE: 03-15-07 *CHANGE **ADDITION ***CORRECTION
SUPERSEDES: 03-25-03
12-11-00
08-21-84
02-05-98

CHEMICAL NAME: NICKEL-CHROMIUM ALLOY

**
TRADE NAME AND SYNONYMS: ATOMIZED POWDERS TYPES AP540, AP550, AP560, AP575, AP576, AP577, CuLox 5755, CuLox 5250, CuLox 5300, CuLox 5750, CuLox 5520, CuLox 5521, 80/20 Ni-Cr, 50-50 Ni-Cr

CHEMICAL NAME: NICKEL-CHROMIUM ALLOY

CHEMICAL FAMILY: ALLOY

FORMULA: NI

MOLECULAR WT: NI=58.7 CR=52

PHYSICAL DATA

APPEARANCE AND ODOR: GRAY POWDER/ NO ODOR
BOILING POINT: NA SPECIFIC GRAVITY (H2O=1): 8.5
VAPOR PRESSURE (MM HG): NA PERCENT VOLATILE BY VOLUME: 0
VAPOR DENSITY (AIR=1): NA EVAPORATION RATE: NA
SOLUBILITY IN WATER: INSOLUBLE HOW BEST MONITORED: AIR SAMPLE

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HAZARDOUS INGREDIENTS

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MATERIAL	PERCENT BY WEIGHT	CAS NUMBER	OSHA PEL MG/M3	ACGIH TLV MG/M3
NICKEL	BALANCE	7440-02-01	1.0	1.0
CHROMIUM	1.0-22%	7440-47-3	0.5	0.5
IRON	0-5.0%	1309-50-8	NONE	NONE
(LIMITS ARE FOR IRON OXIDE FUME)				
SILICON	1.0-5.0%	7440-21-3	10.0	DUST 10.0
BORON	1.0-3.50%	7440-42-8	NONE	NONE
(LIMITS ARE FOR BORON OXIDE)				
CARBON	0-1.25%	7440-44-0	2.5	2.0
COBALT	1.0 MAX	7440-48-4	0.05	0.02
COPPER	-----	7440-50-8	DUST 1.0/FUME 0.1	DUST 1.0/FUME 0.2
MANGANESE	0-3.0%	7439-96-5	5.0 CL/1.0 FUME	DUST 5.0/FUME 1.0
MOLYBDENUM	-----	7439-98-7	10	10.0
VANADIUM	-----	7440-62-2	DUST .05/FUME 0.1	.05 AS V205 DUST & FUME
TUNGSTEN	-----	7440-33-7	5.0	5.0

HEALTH HAZARD DATA

ROUTES OF EXPOSURE:
MATERIAL CAN BE INHALED, SWALLOWED OR COME IN CONTACT WITH THE SKIN OR EYES.

EFFECTS OF OVEREXPOSURE:
DUST AND FUME INHALATION MAY CAUSE IRRITATION OF THE NOSE, THROAT AND RESPIRATORY TRACT. INHALATION OF DUST CONTAINING NICKEL AND CHROMIUM HAS THE POTENTIAL FOR CAUSING NASAL AND LUNG CANCER. SKIN CONTACT CAN CAUSE IRRITATION OR ALLERGIC SKIN DUE TO NICKEL AND/OR CHROMIUM SENSITIZATION. EYE CONTACT MAY CAUSE IRRITATION. CURRENT SCIENTIFIC INFORMATION INDICATES NO ADVERSE EFFECTS ARE LIKELY FROM INGESTION OF SMALL AMOUNTS OF DUST GENERATED FROM THIS MATERIAL.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: IF SYMPTOMS OF PULMONARY INVOLVEMENT DEVELOP (COUGHING, WHEEZING, SHORTNESS OF BREATH, ETC.) REMOVE FROM EXPOSURE AND SEEK MEDICAL ATTENTION.

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SKIN CONTACT: IF IRRITATION OR RASH OCCURS, THOROUGHLY WASH AFFECTED AREA WITH MILD SOAP AND WATER. PREVENT FURTHER CONTACT. IF IRRITATION OCCURS OR RASH PERSISTS, SEEK MEDICAL ATTENTION.

EYE CONTACT: IF IRRITATION OCCURS, FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INGESTION: IF SUBSTANTIAL QUANTITIES ARE SWALLOWED, GIVE (IF CONSCIOUS) A LARGE QUANTITY OF WATER TO DRINK, INDUCE VOMITING AND SEEK MEDICAL ATTENTION.

CARCINOGENIC ASSESSMENT (NTP ANNUAL REPORT, IARC MONOGRAPHS, OTHER):
NICKEL AND CHROMIUM HAVE BEEN IDENTIFIED AS A SUSPECTED CARCINOGEN BY THE NTP AND IARC.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: NA TEST METHOD USED:

FLAMMABLE LIMITS: NA LEL: UEL:

EXTINGUISHING MEDIA:
COVER BURNING MATERIAL WITH AN INERT POWDER, SUCH AS DRY SAND OR LIMESTONE, TO EXCLUDE OXYGEN.

SPECIAL FIRE FIGHTING PROCEDURE:
USE A SELF-CONTAINED BREATHING APPARATUS TO PREVENT INHALATION OF DUST, MIST AND/OR FUMES THAT MAY BE GENERATED DURING FIRE FIGHTING ACTIVITIES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
DUST MAY PRESENT A FIRE OR EXPLOSION HAZARD UNDER FAVORING CONDITIONS OF PARTICLE SIZE, DISPERSION AND STRONG IGNITION SOURCE.

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REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: NA

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS AND ACIDS

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDE FUMES

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NA

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
VENTILATE AREA OF SPILL. CLEAN-UP USING METHODS WHICH AVOID DUST GENERATION SUCH AS VACUUMING (WITH APPROPRIATE FILTER TO PREVENT AIRBORNE DUST LEVELS WHICH EXCEED THE PEL OR TLV), WET DUST MOP OR WET CLEAN-UP. IF AIRBORNE DUST IS GENERATED, USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR.

WASTE DISPOSAL METHOD:
DISPOSE OF IN ACCORDANCE WITH APPROPRIATE GOVERNMENT REGULATIONS.

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SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR IF AIRBORNE DUST CONCENTRATIONS EXCEED THE APPROPRIATE PEL OR TLV. ALL APPROPRIATE REQUIREMENTS SET FORTH IN 29 CFR 1910.134 SHOULD BE MET.

VENTILATION:

USE LOCAL EXHAUST VENTILATION WHICH IS ADEQUATE TO LIMIT PERSONAL EXPOSURE TO LEVELS WHICH DO NOT EXCEED THE PEL OR TLV. IF SUCH EQUIPEMTN IS NOT AVAILABLE, USE RESPIRATORS AS SPECIFIED ABOVE.

PROTECTIVE GLOVES:

GLOVES ARE RECOMMENDED WHEN CONTACT IS LIKELY.

EYE PROTECTION:

SAFETY GLASSES OR GOGGLES ARE RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT: NA

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

MAINTAIN GOOD HOUSEKEEPING PROCEDURES TO PREVENT ACCUMULATION OF DUST. USE CLEAN-UP METHODS WHICH MINIMIZE DUST GENERATION SUCH AS VACCUMING OR WET CLEAN-UP. IF AIRBORNE DUST IS GENERATED, USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR.

OTHER PRECAUTIONS:

WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING OR SMOKING AND AT END OF THE WORK SHIFT. DO NOT SHAKE CLOTHING OR OTHER ITEMS TO REMOVE DUST. USE A VACUUM. AVOID DUST INHALATION AND DIRECT SKIN CONTACT. DO NOT INGEST. PERIODIC MEDICAL EXAMINATIONS ARE RECOMMENDED FOR INDIVIDUALS REGULARLY EXPOSED TO DUST.

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IN CASE OF QUESTIONS, PLEASE CALL:

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