

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : BUEHLER CONDUCTIVE FILLER
 IDENTIFICATION NUMBER: NICKEL FLAKE
 PRODUCT USE/CLASS : Powder

SUPPLIER:

Buehler UK, Ltd.
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 Coventry CV6 5SF ENGLAND

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PREPARER: Technical Department, PHONE: +18472955600, PREPARE DATE: 22/05/02

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%
01	Nickel Classification: Xn; Carc. Cat. 3; R40-43	7440-02-0	60.0-100.0

EXPOSURE LIMITS

ITEM	U/K		GERMANY		OTHER	SKIN
	8-HR REL	15-MIN STEL	8-HR MAK	15-MIN MAK	8-HR TWA	
01	0.1mg/m3	N.E.	.1mg/m3	N/E	N.E.	NO

(See Section 16 for abbreviation legend)

SECTION 3 - IDENTIFICATION OF HAZARDS

EMERGENCY OVERVIEW: (R40) Possible risk of irreversible effects. (R43) May cause sensitisation by skin contact.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT, INHALATION,

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention if irritation develops or persists.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

INHALATION: If symptoms occur, remove to fresh air. Medical personnel may administer oxygen if breathing is difficult. Seek medical attention if symptoms persist.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: N.A.

LOWER EXPLOSIVE LIMIT: N.A.
 UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: No data

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SECTION 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: CO2, DRY CHEMICAL

UNUSUAL FIRE AND EXPLOSION HAZARDS: Fine dust suspended in air may present explosion hazard.

SPECIAL FIREFIGHTING PROCEDURES: Halogenated extinguishing agents (such as Halon) should not be used. To control the spread of fire, do not use water; ring small fires with dry sand, using non-sparking shovels; avoid creating dust clouds, eliminate drafts, let fire extinguish itself.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Reclaim clean material. Contaminated material should be swept or shovelled into appropriate waste container and disposed of in accordance with applicable national, regional, and local regulations. Flush spill area.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Minimize dust generation and accumulation. Follow good general industrial safety practices during use and handling.

STORAGE: No special requirements.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: No special ventilation normally required.

RESPIRATORY PROTECTION: None normally required under good general industrial ventilation.

SKIN PROTECTION: Cloth or synthetic gloves.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Not Applicable.

HYGIENIC PRACTICES: DO NOT reuse empty containers.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE : -18 - 2730 C VAPOR DENSITY : Is heavier than air
ODOR : None ODOR THRESHOLD : N/A
APPEARANCE : Grey powder EVAPORATION RATE: Is slower than Butyl
SOLUBILITY IN H2O : Insoluble Acetate
FREEZE POINT : No data SPECIFIC GRAVITY: 1.9236
VAPOR PRESSURE : N/A pH @ 0.0 % : N/A
PHYSICAL STATE : Powder VISCOSITY : N/A
COEFFICIENT OF WATER/OIL DISTRIBUTION: No data
(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Not Applicable.

INCOMPATIBILITY: Strong acids.

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SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: Under special conditions, nickel can react with carbon monoxide in reducing atmospheres to form nickel carbonyl, an extremely toxic gas.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

ACUTE EFFECTS - EYE CONTACT: Contact may cause eye irritation.

ACUTE EFFECTS - SKIN CONTACT: Substance may cause slight skin irritation. Repeated or prolonged contact may cause sensitization.

ACUTE EFFECTS - INHALATION: Repeated and prolonged inhalation may be harmful. Causes respiratory tract irritation.

ACUTE EFFECTS - INGESTION: Not expected to present a hazard in normal industrial use.

CHRONIC OVEREXPOSURE EFFECTS: *IARC has listed nickel as a possible cancer hazard, although IARC could not state with certainty which forms of nickel are human carcinogens. Rodents exposed to high levels of nickel powder via inhalation did not develop increased incidences of malignant tumours.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Material as sold may be disposed of in landfill. If material becomes contaminated, follow disposal instructions for contaminant.

SECTION 14 - TRANSPORTATION INFORMATION

INTERNATIONAL SHIPPING NAME: Not considered a dangerous good for transport by all modes

INTERNATIONAL ID NUMBER: N/A

IMDG CLASS (1ø,2ø): N/A

IMDG PAGE NUMBER: N/A

IMDG EMS: N/A

IATA CLASS (1ø,2ø): N/A

SECTION 15 - REGULATORY INFORMATION

CHiP SUPPLY LABEL RISK PHRASES: R40: Possible risk of irreversible effects. R43: May cause sensitisation by skin contact.

CHiP SUPPLY LABEL SAFETY PHRASES: S22: Do not breathe dust. S36: Wear suitable protective clothing

CHiP SUPPLY LABEL SYMBOLS: Xn; Harmful; Carc. Cat. 3

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SECTION 16 - OTHER INFORMATION
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PREVIOUS MSDS REVISION DATE: none

REASON FOR REVISION: new product

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

ABBREVIATIONS: Administrative Revision Date: Reason for administrative
revision: ACGIH = American Conference of Governmental Industrial
Hygienists; UK = United Kingdom; REL = Recommended Exposure Limit; MAK =
Maximale Arbetisplatzkonzentration (Maximum Concentration in the
Workplace); TLV-TWA = Threshold Limit Value-Time Weighted Average (8
hours); STEL = Short-Term Exposure Limit (15 minutes); C = Ceiling Value;
PEL = Permissible Exposure Limit

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