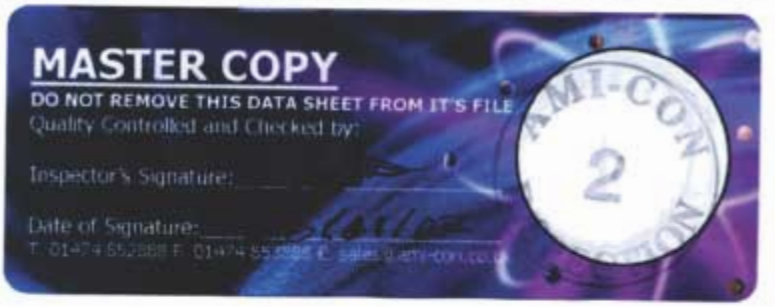
1 DENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product Name

Nicrobraz LM S

Chemical Characterization

Nickel based brazing paste



Producer/Supplier

Wall Colmonoy
Alloy Industrial Estate
Pontardawe
Swansea
SA8 4HL United Kingdom
Phone Number +44 (0) 1792 862 287
Fax +44 (0) 1792 830 124

Emergency Phone Number (24h)

For UK:
National Chemical Emergency Centre
Tel: +44 (0) 870 190 6621 Fax: +44 (0) 870 190 6614

2 COMPOSITION / INFORMATION ON INGREDIENTS

Typical analysis

Filler metal 88%
Inert Binder 12%

Ingredient	Weight % of 100% preparation	Risk	CAS No.	Maximum Exposure limits	TLV (2) mg/m³
Nickel	Balance	40, 43	7440-02-0		1.0
Boron	3.1	22	7440-42-8		
Chromium	7.0		7440-47-3		0.5
Iron	3.0		7439-89-6		None
Silicon	4.5		7440-21-3		

The inert binder (gel) does not contain any substances presenting a health or environmental hazard defined by directive 1999/45/EG nor any substances for which there are community workplace exposure limits in concentrations equal to or greater than those laid down in the above listed directive.

3 HAZARDS IDENTIFICATION

General

Category 3 carcinogen

Symbol

Xn Harmful

Risk Phrase

R40	Limited evidence of a carcinogenic effect
R43	May cause sensitization by skin contact

Safety Phrase

S36	Wear suitable protective clothing
S38	In case of insufficient ventilation wear suitable respiration equipment

4 FIRST AID MEASURES

General Information

See medical advice, if any discomfort continues Take of contamination cloth immediately and wash before re-use.

Skin contact

Wash off with soap and plenty of water. Do not use solvents or thinner.

Eye contact

Make sure to remove any contact lenses from victim before rinsing. Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation seek medical attention.

Inhalation

Move to fresh air. In case of irritation of respiratory system or mucous membranes, seek medical attention.

Ingestion

If a significant amount was ingested, induce vomiting and consult medical personnel.
Never make any unconscious person vomit or drink fluids.
In case of spontaneous vomiting be sure that vomitus can freely drain due of danger of suffocation.
Seek medical advice.

Wounds

Clean wounds to remove powder particles.

5 FIRE-FIGHTING MEASURES

General

This material has no fire or explosion hazard.

Suitable extinguishing media

Dry chemical, sand or CO^2. Select extinguisher agent appropriated to surrounding burning materials

Extinguishing media which must not be used for safety reasons

Do not use water on metal fires.

Exposure hazards

Exposure to decomposition product may cause health hazard.

Special protective equipment for firefighters

Wear full protective clothing. Wear self-contained breathing apparatus.

Hazardous decomposition products

Oxides of carbon, Toxic gases/vapours

6 ACCIDENTAL RELEASE MEASURES

Personal precautions

Do not breathe vapors, fumes or dust. Care should be taken to maintain work area below recommended TLV limits. Wear appropriate approved respirators maintain good extraction / ventilation. Contact with Skin, eyes, and cloth should be avoided.

Environmental precautions

Should waste disposal be deemed necessary, contact local authorities for guidance. Do not allow to enter drains, rivers or lakes.

Measures in case of spillage / release

Contain spillage with non-combustible absorbent material as sand or vermiculite and place in container for disposal according to local regulations. Do not place back into original container to avoid contamination.

7 HANDLING AND STORAGE

Handling

Ensure good local exhaust ventilation. Maintain airborne particle level as low as possible.
Do not eat, drink or smoke at the workplace. Avoid repeat skin contact. Wash thoroughly after handing.
Wear respirators if airborne nickel levels exceed TLV / MEL. Avoid repeated skin contact.

Storage

Keep away from food and drink. Store in the original container. Ensure containers are securely closed.

- *Storage with other materials*

Do not store near strongly acids, alkaline materials or oxidizing agents. Nickel and its alloys can react with acids to liberate hydrogen gas, which can form explosive mixtures in air. Do not store

- *VCI classification*

12 Not flammable liquid

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

As supplied this product contains no dust. Ventilation is required if user change physical or chemical form.

Exposure limit(s)	Value for alloy not tested. MEL for Nickel 0.5 mg/m³
Technical measures/Precautions	Ensure good local exhaust ventilation
Respiratory protection	Do not breath in dust / fumes. In case of insufficient ventilation wear suitable respiratory equipment. Wear respirators if airborne nickel levels exceed TLV / MEL
Hand protection	Avoid repeat skin contact. Wear protective gloves
Eye protection	Avoid contact with eyes. Suitable goggles or face protection
Skin and body protection	Working clothes, closed footwear. Do not eat / drink, smoke at workplace

9 PHYSICAL AND CHEMICAL PROPERTIES

Form	Paste (liquid)

Color	Gray metal
Odor	None
Melting / freezing temperature	**Solidus 970°C** **Liquidus 1000° C**
Boiling point/range	not tested
Spec. Gravity	7.97
Flash point	> 63° C
Oxidizing properties	not tested
Self-ignition temperature	not applicable
Water solubility	Powder Nil, Binder 100%
Vapor pressure	N/A
pH-value	Not tested
Viscosity	not applicable

For further information see Technical Data Sheet

10 STABILITY AND REACTIVITY

Decomposition temperature	not tested
Conditions to avoid	Do not leave container open. Reduced atmospheres: In reduced atmospheres nickel can react with carbon monoxide to form Ni(CO)4, which is an extremely toxic gas.
Materials to avoid	Acids: Hydrogen gas can be liberated when nickel or its alloys react with acids. Hydrogen gas can be explosive. Strong oxidizing agents
Hazardous decomposition products	Ni(CO)4 Toxic gases / vapors, Hydrogen gas HCL, metal oxids

Fumes and gases from welding, brazing, sintering etc, cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, brazed or sintered, the process, procedure and powder used.
Other conditions which influence the composition and quantity of the fumes and gases to which workers may be exposed include; the number of welders, furnaces and the volume of work area, the quality and amount of ventilation, the presence of contaminates in the atmosphere.
The gases may include carbon monoxide and the oxides of nitrogen and ozone.

11 TOXICOLOGICAL INFORMATION

Nickel Powder

Acute oral toxicity	LD50 > 500 mg/kg (rats)
Acute dermal irritation/corrosion	Repeated contact with metallic nickel can cause nickel sensitivity resulting in allergic reactions such as skin rashes. Repeated contact is not likely to cause absorption with skin in toxic quantities.

Inhalation

The International Agency for Research on Cancer concluded there was sufficient evidence that nickel refining was carcinogenic to humans. The Agency for Research on Cancer could not state with certainty which forms of nickel are human carcinogens but said "metallic nickel seems less likely to be so than nickel subsulphide or nickel oxides". The inhalation of nickel powders has not resulted in an increased incidence of malignant tumors in rodents. Studies of workers exposed to nickel powder and to dust and fume generated in the production of nickel alloys and of stainless steel have not indicated a respiratory cancer hazard. The USA National Toxicology program identifies nickel and nickel compounds as possible cancer hazards.

Acute inhalation dose LC_{50} in rats is greater than 10 mg/L.

Chromium

Acute dermal irritation/corrosion

No residual injury is expected from handling material.

Inhalation

The International Agency for Research on Cancer (IARC) has determined that chromium and certain chromium compounds are casually associated with cancer in humans but the compounds responsible for carcinogenic effects in humans can not be specified.

12 ECOLOGICAL INFORMATION

Ecotoxic effects

Prevent contamination of soil, drains or surface water.
Do not discharge product uncontrolled into the environment.

13 DISPOSAL CONSIDERATIONS

Waste from residues / unused products

Nickel alloy waste is normally collected to recover nickel value. The preparation must be disposed of by special means. Dispose by incineration or landfill via licensed waste disposal contractor in accordance with local and national regulations. Do not allow into drains or water course.

Contaminated packaging

Contaminated packaging should be emptied as far as possible, they can then be recycled after being thoroughly cleaned. Contaminated packaging material should be treated equivalent to residual chemical. Labels must not be removed from containers until they have been cleaned.
Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

14 TRANSPORT INFORMATION

UN Number ***N/A***

Transport by Rail / Road ***RIDDAR not applicable***
Class:

Transport by Sea ***(IMDG) not applicable***
Class:

Marine pollutant: NO

Transport by Air (IATA, ICAO) not applicable

Class:

15 REGULATORY INFORMATION

Classification

Carcinogen Cat 3

Labeling according to EC directives

Symbol: Xn harmful
Risk Phrases R40, R43
S Phrases S36, S38

National regulation

Within the UK, the use of this material must be assesses under the COSHH regulation
Within Europe the EC Directive 1999/45/EG, 67/548/EWG and 91/155/EWG apply.

16 OTHER INFORMATION

Changes

Authorising Body ***Technical Manager, WCL Pontardawe UK***

Important

This product should be stored, handled and used in accordance with good industrial practices and in conformity with any legal regulation. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.