



Trade names : Phynox

Supplier : Lamineries Matthey SA
Edition 1 issued : 07.05.2007

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1. Identification of preparation and company

Preparation: Trade name P H Y N O X

supplied as solid, compact and non-inhalable semi-finished products in the form of slabs or cold rolled strips.

Manufacturer/Supplier:

Lamineries Matthey SA

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2. Composition/Ingredients

CAS-N°	% by mass	Name	EINECS- /EC-N°	INDEX- N°	EU - Classification
7440-02-0	16	Nickel	231-111-4	028-002-00-7	R 40, R 43
7440-47-3	20	Chromium	231-157-5		
7440-48-4	40	Cobalt	231-158-0	027-001-00-9	R 42/ R 43, R 53
7439-98-7	7	Molybdenum	231-107-2		
7440-50-8	16	Fe	231-		

3. Hazard identification

Nickel containing alloys:

Hazard Designation: Xn Harmful, Classification: R 40, R 43

Cobalt containing alloys:

Hazard Designation: Xn Harmful, Classification: R 42 / R 43, R 53

Machining, welding and thermal cutting may cause dust or fumes which may be harmful to human health when being inhaled. According to the EU classification of carcinogenic substances in category 3 nickel in breathable condition is causing concern for man owing to possible carcinogenic effects, and there is sufficient evidence in humans for the carcinogenicity of combinations of nickel sulphides and oxides encountered in the nickel refining industry. However, the specific



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carcinogenic substances could not be identified. The cancer hazards seemed to be associated with previously used methods of nickel refining.

Information Pertaining to Particular Dangers: Handling of the products may cause injury by cutting.

Additional hazard warnings involving man and environment: In the form in which they are placed into circulation the alloys as in Sect. 1 have to date not been found to have any harmful effect on human health or the environment. Thermal and mechanical processing can produce fumes and dust which can, in the event of excessive exposure, lead to acute irritation of the eyes and respiratory organs and to long-term harm, especially to the lungs (cf. Sect. 8, 11).

4. First-aid measures

The measures described below concern emissions of dusts and/or fumes.

After inhalation: supply of fresh air, call a doctor if need be,
After skin contact: not applicable,
After eye contact: rinse with fresh water having the eyelid opened, call a doctor if need be
After swallowing: not applicable

5. Fire fighting measures

Suitable extinguishing agents: use fire-fighting measures that suit the environment.
Protective equipment: no special measures required.

6. Accidental release measures

Person-related safety precautions: avoid causing dust.
Measures for environmental protection: no special measures required.
Measures for cleaning / collecting: dispose of contaminated material as waste according to item 13

7. Handling und storage

7.1 Handling:

Information for safe handling: Don't breathe in grinding dust, polishing dust, fumes generated by cutting and welding or any aerosols. Ensure good ventilation 1 exhaustion at the workplace. Information about protection against explosions and fires: keep breathing equipment ready.



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7.2 Storage:

Requirements to be met by storerooms and containers:	no special requirements.
Information about storage in one common storage facility:	not applicable.
Further information about storage conditions:	not applicable,
Storage class, - class according to regulation on inflammable liquids:	not applicable.

7.3 Specific uses:

The material complies with the requirements of Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment and of the Directive 2000/53/EC on end-of life vehicles: it is free from any additions of the hazardous substances mentioned in both directives

8. Exposure controls and personal protection

8.1. Exposure limits

There are no occupational exposure limits for the alloys as in Sect. 1, although some do apply to certain elements contained in these preparations, such as Fe, Co, Ni, Cr, and Mo and/or some of their compounds. The relevant national limit specifications should be observed.

8.2. Exposure controls

During thermal and mechanical processing (e. g. welding, cutting, grinding) fumes and dust can be produced with constituents underlying certain limit values. Suitable exhausters should be fitted for this reason.

Eye protection: Suitable goggles should be worn to protect against airborne dust, flying sparks etc.

Hand / body protection: May become necessary depending on the activity being performed.

Skin protection: Wear protective clothes to avoid direct contact with the material to be handled and to keep off any dust which may develop.

9. Physical and chemical properties

9.1 General Information:

Physical State:	solid matter.
Colour:	silver grey
Smell:	odorless.



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9.2 Important health, safety and environmental information:

Melting point / melting range: 1450 °C.
Boiling point / boiling range: unknown.
Flash point: not applicable.
Danger of explosion: product is not explosive.
Density at 20°C: 8.3 t/m³.
Solubility in / miscibility with water: insoluble.

Other information: Not applicable

10. Stability and reactivity

Stable under normal conditions for the storage and transport of solid substances.

10.1 Conditions to avoid: not applicable.

10.2 Materials to avoid: contact with acids may result in the release of toxic nitrogen oxide and of hydrogen which can result in explosive gases mixtures when mixed with air. It is, therefore, recommended to ask for expert advice before bringing the materials in contact with acids.

10.3 Hazardous decomposition products: no hazardous decomposition products known.

11. Toxicological information

11.1. Inhalator or oral toxicity

The preparations as in Sect. 1 are compact solids and normally cannot be breathed in or swallowed. Regardless of this, there would be no acute toxic affect if these would be breathed in or swallowed
- *Nickel* : substance classified in the European 67/545/CEE commission like suspect, being a carcinogen of the 3rd Category, by inhalation of dust.

- *Cobalt* : can generate irritations of nose and throat, asthma and lung changes, allergic dermatitis, by inhalation of dust.

11.2. Dermatological toxicity

Prolonged direct skin contact may cause dermatitis in nickel-sensitized persons. Directive 67/548/EEC classifies nickel as a skin sensitizer, i.e. prolonged direct contact with the skin (e. g. when wearing articles of jewellery) can lead to sensitization of susceptible individuals. According to Directive 1999/45/EC all preparations containing min. 1 % nickel by mass are in principle likewise to be classified as sensitizers (cf. Sect. 3)

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12. Ecological information

Persistence : Product stable without decomposition in natural media.

13. Disposal considerations

Metal scrap is a valuable raw material and easy to recycle for reuse. Disposal in waste dumps is not harmful to the environment, but it is a waste of valuable natural resources and should therefore be avoided

The preparations as in Sect. 1 do not cause contamination of the packaging materials employed.

14. Transport information

Non-dangerous good according to transport regulations.

15. Regulatory information

Nickel : R 40 – 42- 43

Cobalt : R 42 - 43

Products must be labeled with hazards identification and to refer to the MSDS to be introduced on USA market.

16. Other information

Reference : NF ISO 11014-1.
European directives : 91/155/CE and 2001/58/CE
Content of last issue : new presentation.

This material safety data sheet describes products of Lamineries Matthey SA with respect to their safety requirements. The details given are based on the information and experience available, but they do not provide or imply guarantees regarding product characteristics, nor do they suppose a legal or contractual obligation of any kind.