

MATERIAL SAFETY DATASHEET



One Omega Drive
Stamford, CT 06907-0047
omega.com[®]
e-mail: *info@omega.com*

MSDS-NI60&NI80
Rev. Date 08/20/12
Supersedes: 09/30/10

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CATEGORY: Nikrothal N20,N30, N40, N40B, N42, N60, N60T,N70, N80, N80S, 35/19CB, NRX600, NRX601, NXT

PRODUCT TYPE: Heat Resistant Alloy

SUPPLIER: OMEGA Engineering, Inc.

ADDRESS: PO Box 4047
Stamford, CT 06907

TELEPHONE: (203) 359-1660

SECTION 2. HAZARDS IDENTIFICATION

SYMBOL: T Toxic

R Value: R40 Limited evidence of a carcinogenic effect
R43 May cause sensitization by skin contact
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation

INJURIOUS TO PROPERTIES: Nickel limited evidence of a carcinogenic effect. Nickel may cause sensitization by skin contact. Chromium may cause contact eczema.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Compounds	EINECS-no.	CAS. No.	Content %	Symbol/R-value
Nickel	231-111-4	7440-02-0	19-80	Canc 3 T R40 R43 R48/23
Chromium	231-157-5	7440-47-3	14-32	
Aluminium	231-072-3	7429-90-5	Max 4	
Manganese	231-105-1	7439-96-5	Max 3	
Iron	231-096-4	7439-89-6	Balance	

SECTION 4. FIRST AID MEASURES

INHALATION: Move to fresh air

SKIN CONTACT: Wash with soap and water

EYES CONTACT: Rinse immediately with water for several minutes, with eyelids held open.

INJECTION: Not a normal route of exposure

SECTION 5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Use suitable extinguishing media for surrounding materials and type of fire.

EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS: None known

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SECTION 5. FIRE-FIGHTING MEASURES CONTINUED

SPECIAL EXPOSURE HAZARDS ARISING FROM THE SUBSTANCE OR PREPARATION ITSELF, COMBUSTION PRODUCTS, RESULTING GASES: None know.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Wear fully protective impervious suit.

SECTION 6. ACCIDENT RELEASE MEASURES

PERSONAL PRECAUTIONS: Use protective clothing and gloves. Also see section 8.

SECTION 7. HANDLING AND STORAGE

HANDLING: Follow generally accepted industrial practice for good hygiene.

STORAGE: Keep dry.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMIT VALUES: Hygiene standards and exposures limits may differ from country to country. Check those currently applying in your country and comply with regulations.

Compound	Exposure Limit	Type of Value
Nickel	0.5 mg/m ³	NGV (Total)
Chromium	0.5 mg/m ³	NGV (Total)
Aluminium	2 mg/m ³	NGV (Respirable)
	5 mg/m ³	NGV (Total)
Manganese	0.1 mg/m ³	NGV (Respirable)
	0.2 mg/m ³	NGV (Total)

NGV = "Level Limit Value", sanitary limit value for exposure during one working day.

EXPOSURE CONTROLS PREVENTIVE ACTION: Good general ventilation is recommended.

RESPIRATORY PROTECTION: Use when necessary.

HAND PROTECTION: Protective gloves, avoid skin contact.

EYE PROTECTION: Wear safety glasses when tooling.

SKIN PROTECTION: Wear suitable protection clothing and protective shoes.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

FORM:	Solid, metal
COLOR:	Metallic
ODOR:	Odorless
DENSITY:	≈ 8 g/gm ³
MELTING POINT (approx.):	≈ 1400°C, ≈ 2550°F
WATER SOLUBILITY:	Insoluble

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SECTION 10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: -

MATERIALS TO AVOID: -

HAZARDOUS DECOMPOSITION PRODUCTS: -

SECTION 11. TOXICOLOGICAL INFORMATION

INHALATION: Dust may cause sensitive persons problems with respiration.

SKIN CONTACT: May cause contact eczema and allergy when repeatedly skin contact.

EYE CONTACT: Product dust may cause temporary mechanical eye irritation.

INGESTION: Not a normal route of exposure.

NICKEL: Nickel is the most commonly occurring contact allergen. According to surveys from USA, Italy, Denmark, Finland, and Sweden, 8-22% of women and 0.3-3% of men develop hypersensitivity to nickel (National Chemicals Inspectorate, Sweden, 1995). The main method of exposure is contact with metallic nickel and/or nickel alloys.

Exposure to nickel has been linked to a risk of lung cancer and nasal cancer, but it has not been possible to identify the form in which nickel is carcinogenic.

The EU has classified metallic nickel as Category 3 carcinogens with a R40 risk rate - Limited evidence of a carcinogenic effect.

CHROMIUM

Prolonged contact with chromium compounds or with materials containing chromium can cause allergic reactions. Based on research, it is believed that this only occurs with contact with chromium (VI). Allergic skin reactions are particularly common in work places where work involves the handling of chromates, dichromates and chromic acid fumes, but chromium allergies have been observed in housewives, cement workers, furriers and joiners (National Chemicals Inspectorate, Sweden, 1995). One type of contact eczema, "cement eczema" is thought to be caused by chromium (VI) in cement.

People who have developed chromium allergies also tend to be hypersensitive to other metals, mainly nickel and cobalt (National Chemicals Inspectorate, Sweden, 1995)

SECTION 12. ECOLOGICAL INFORMATION

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal in accordance with all applicable local and national regulations.

SECTION 14. TRANSPORTATION INFORMATION

Road transport (ADR) Not classified as dangerous in the meaning of transport regulations.

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SECTION 15. REGULATORY INFORMATION

SYMBOL: T Toxic

R VALUE: R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitization by skin contact.
R48/23 Toxic: Danger of serious damage to health by prolonged exposure through inhalation.

S VALUE: S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately. Show the label where possible.

SECTION 16. OTHER INFORMATION

Information in this Safety Data Sheet is based on the form of the product is released on the market.

LIST OF RELEVANT R PHRASES: R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitization by skin contact.
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

REFERENCE: Kemikalienspekionen (1995) Hazard Assessments - Chemical Substances Selected in the Swedish Sunset Project. Supplement to the Keml Report 13/94. Keml Report No. 12/95.
Waltersson, Eva (1999) Environment Research team. Chromium, Nickel, Molybdenum. In village and and environment. A collection of facts of flow, quantites, and effects in Sweden.

REVISION: Revised in accordance with REACH regulation.

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