

UDDEHOLM TOOLING SAFETY DATA SHEET

(Prepared according to EU Directives 91/155/EEC, 2001/58/EC and 1999/45/EC)

Alloy: Generic data sheet 15 a - POLMAX

Issued: 2005-01-26

Revised: 2008-10-29

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Identification of the substance/preparation

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1.2 Use of the substance/preparation

Metal alloy for fabrication

1.3 Company Identification

Manufacturer

UDDEHOLM TOOLING AB
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Sweden
Tel.: +46 563 170 00
Fax: +46 563 174 61
Internet: www.uddeholm.com

Contact: Thomas Hillskog. E-mail: thomas.hillskog@uddeholm.se

1.4 Emergency Phone No.

Swedish Poison Centre

+46 8-33 13 31

2. HAZARDS IDENTIFICATION

2.1 Classification and labelling of preparation

Alloys in massive form do not require classification and labelling under current chemical product classification and labelling regulations. Processes which generate particulates (dust, fumes, mist) from the working of alloys can cause hazards to health or environmental effects.

2.2 Dangerous properties of particles/dust/fumes

Contains nickel. May cause an allergic reaction on contact with skin.

R52/53 Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 General Information

Alloy in massive form not requiring labelling according to EU Directive 1999/45/EC

3.2 Hazardous component(s)

Ingredient	EC Number CAS Number Index Number	Symbols	Risk Phrases *	Concentration (weight %)
Carbon (C)	231-153-3 7440-44-0 -	Xi, F	R17-36/37	<2 %
Manganese (Mn)	231-105-1 7439-96-5 -	Xn, N, F	R11-20-50/53	<2 %
Chromium (Cr)	231-157-5 7440-47-3 -	-	R53	15-20 %
Nickel (Ni)	231-111-4 7440-02-0 028-002-00-7	Xn	R40-43	<1 %
Molybdenum (Mo)	231-107-2 7439-98-7 -	F, N	R11-50-67	<2 %
Vanadium (V)	231-171-1 7440-62-2 -	Xi	R36/37/38	<5 %
Copper (Cu)	231-159-6 7440-50-8 -	Xn, N	R20-50/53	<0.5 %
Aluminium (Al)	231-072-3 7429-90-5 013-001-00-6	F, N	R15-17-50/53	<0.5 %
Iron (Fe)	231-096-4 7439-89-6 -	O	R7	>70 %

* For complete wording of R-phrases see section 16

4. FIRST-AID MEASURES

4.1 General Information

Show this safety data sheet to the doctor on duty.

4.2 Inhalation

If dust, fumes or mist inhaled, remove patient to fresh air, allow to rest and keep warm.

4.3 Skin contact

Immediately remove any metal fragments or pieces that get under the skin. Wash well with plenty of soap and water following any contact with metal particles. Remove any contaminated clothing and launder before reuse. Seek medical attention if irritation develops.

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4.4 Eye contact

Avoid getting finely divided particles in the eyes. Flush immediately with plenty of luke-warm water, keeping eyelids open. Seek medical attention if symptoms persist.

4.5 Ingestion

Alloys in massive form are not hazardous, but should be kept out of the mouth. Finely divided particles may be easily ingested along with food, drink or smoking. If large quantities ingested, seek medical advice.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Where metal dust or powder is involved, cover with dry sand, chemical powder, or other dry inert material to minimise the risk of explosion.

DO NOT use water.

6. ACCIDENTAL RELEASE MEASURES

Not applicable to alloys in massive form. In particulate form, wear personal protective equipment as specified in Section 8. Avoid contact with the skin. Do not inhale dust. Collect powder using a vacuum cleaner or by gentle sweeping. Avoid formation of dust clouds. Prevent particulates from entering watercourses or drains.

7. HANDLING AND STORAGE

7.1 Recommendations for safe handling

No special precautions necessary for alloys in massive form other than normal physical handling techniques. Extraction should be used when working with particulate material (dust, fumes, mist). Avoid prolonged inhalation of dust. Wear gloves to avoid contact with skin (see Section 8).

7.2 Storage

No special requirements for alloys in massive form

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 National Exposure Limits

Manganese	UK	WEL	0.5mg/m ³	total
	Sweden	NGV	0.2mg/m ³	total
Chromium	UK	WEL	0.1mg/m ³	respirable
	Sweden	NGV	0.5mg/m ³	total
Nickel	UK	WEL	0.5mg/m ³	total
	Sweden	NGV	0.5mg/m ³	total
Molybdenum	UK	WEL	None set	
	Sweden	NGV	10mg/m ³	total
Copper	UK	WEL	5mg/m ³	respirable
			0.2mg/m ³	fume
Aluminium	Sweden	NGV	1mg/m ³	dusts and mist
			1mg/m ³	total
	UK	WEL	10mg/m ³	8hr TWA
			4mg/m ³	15min
Sweden	NGV	5mg/m ³	total	
		2mg/m ³	respirable	

All over 8 hour period unless otherwise stated

Monitoring procedures Not required

8.2 Control of Exposure

8.2.1 Respiratory protection

Extraction should be used when working with dusty materials.

8.2.2 Skin protection

Wear hand protection, eg leather gloves when handling alloys with sharp edges to avoid cuts. Always wear disposable nitrile or vinyl gloves when handling particulate material to avoid skin contact. Where necessary wear the disposable gloves under work gloves to protect against both types of hazard.

8.2.3 Eye protection

Always wear eye protection when handling dusts and other particulates, eg safety glasses with side protection, safety goggles or visor.

8.2.4 Protective clothing

Always wear protective clothing when handling dusts and other particulates

8.2.5 General hygiene measures

Wash hands well with soap and water after handling dusty materials. Wash contaminated clothing to avoid secondary contamination or contamination of other personnel.

8.2.6 Technical advice

Ensure adequate ventilation to keep levels of air-borne particles below occupational exposure limits given above. Working areas should be provided with extraction. Factories should be kept clean to avoid any unnecessary contamination.

Always check the applicability of any protective equipment with your supplier.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Alloy in massive form
Appearance	Metallic
Density (kg/dm ³)	7.8
Melting point (°C)	1200 -1500

Note: These are typical values and do not constitute a specification.

10. STABILITY AND REACTIVITY

10.1 Stability

Alloys are stable. Corrosion should not take place under normal circumstances.

10.2 Materials to avoid

Contact with acids can generate explosive gasses, eg hydrogen.

10.3 Further information

Finely divided iron can explode in contact with air. Solid will react with oxidising materials, fluorine, chlorine, chlorine trifluoride, hydrogen peroxide, etc.

Finely divided chromium can explode in contact with air. Solid will react with bromine pentafluoride.

Finely divided chromium will react with ammonium nitrate, carbon dioxide, nitrogen oxides and sulphur dioxide.

Vanadium powder can explode in contact with chlorine, even at 0°C.

Finely divided manganese will react with aluminium dust, sulphur dioxide, carbon dioxide, fluorine, chlorine, hydrogen peroxide and nitric acid.

Finely divided molybdenum will react with oxidising materials such as bromine trifluoride, fluorine, bromine pentafluoride, chlorine trioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Effect on humans

Alloys contain nickel which carries a risk of producing an allergic reaction following skin contact or in already sensitised persons.

11.2 Acute toxicity

Iron - Oral LD₅₀ rat (mg/kg bodyweight) 30000 (not harmful)

11.3 Further information

No further toxicological data available for these products. See other reports for details of toxicological data on other materials, see Section 16.

12. ECOLOGICAL INFORMATION

12.1 Mobility

Metal alloys are not soluble in water. Particles formed by working alloys can be transported in the air.

12.2 Bioaccumulation

Alloys contain heavy metals which can probably bioaccumulate in the food chain.

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12.3 Ecotoxicity

Alloys contain metals which are considered to be very toxic towards aquatic organisms. Finely divided alloys are therefore considered harmful to aquatic organisms.

12.4 Further information

In massive form alloys present no hazards to the aquatic environment. Particles and ions can, never the less, enter the aquatic compartment by means of dusts or smoke, or by liberation due to erosion thereby introducing iron or heavy metals into the ground or water.

13. DISPOSAL CONSIDERATIONS

Under Swedish regulation SFS 2001:1063 and GB regulation SI 1999:972 (both of which enact European Directive 91/689/EC) these products must be disposed of under one or more of the following European Waste Codes via a licensed contractor:

06 04 05* Waste containing other heavy metals

12 01 01 Ferrous metal filings and turnings

12.01.02 Ferrous metal dust and particles

Any residues of finely divided product (particles, dust, fumes) are regarded as Hazardous Waste.

14. TRANSPORT INFORMATION

Alloys in massive form are not classified as dangerous goods for transport.

15. REGULATORY INFORMATION

15.1 General Guidance

Under EU Directives 67/548/EEC and 1999/45/EC, as amended, alloys in massive form are exempted from the regulations requiring labelling of chemical products.

15.2 Labelling of preparation

The labelling shown below refers to the properties of particles (dust, fumes, mist) which can arise from the working of alloys.

15.2.1 Symbol(s)

-

15.2.2 R-Phrase(s)

R52/53

Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

15.2.3 S-Phrase(s)

-

15.2.4 Further information

Contains nickel. May cause an allergic reaction on contact with skin.

(NB Risk- and Safety-phrases given are not for the alloys in massive form, but only for alloys in particulate form eg dust, fumes, mist!)

16. OTHER INFORMATION

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16.1 Full text of R-phrases used in Section 2

R7	May cause fire
R11	Highly flammable
R15	Contact with water liberates extremely flammable gases
R17	Spontaneously flammable in air
R20	Harmful by inhalation
R36/37	Irritating to eyes and respiratory system
R36/37/38	Irritating to eyes, respiratory system and skin
R40	Limited evidence of a carcinogenic effect
R43	May cause sensitisation by skin contact
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R67	Vapours may cause drowsiness and dizziness

16.2 Modifications since previous version

Change of classification and various details (see other reports for more information). New occupational exposure limits for chromium and manganese. All sections of the data sheet have been checked and updated.

16.3 Sources of information

See other reports for details of sources.

16.4 References to further information

This information is in addition to any existing information. Users must ensure that the information is adequate for their purposes. Responsibility of product safety resides with Uddeholm Tooling AB. This Safety Data Sheet was prepared with the assistance of Amasis Konsult AB, Solna.

For any further information, please contact:

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