

UDDEHOLM TOOLING SAFETY DATA SHEET

(Prepared according to EU Directives 1907/2006 (REACH) & 1272/2008 (CLP))

Granshot 2 delivered from UDDEHOLM

Issued: 2008-04-09

Revised: 2010-01-04

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1. COMPANY AND PRODUCT INFORMATION

1.1 Identification of the substance/preparation

GRANSHOT 2

1.2 Use of the substance/preparation

Melting stock for foundries

1.3 Company Identification

Manufacturer

UDDEHOLM TOOLING AB

S-683 85 HAGFORS

Sweden

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1.4 Emergency Phone No.

Swedish Poison Centre

+46 8 33 12 31

2. HAZARDS IDENTIFICATION

2.1 Classification and labelling of preparation

Alloys in granular form, as in massive form, do not require labelling under current chemical product classification and labelling regulations, if they are not classified as hazardous to health and environment. Alloys containing nickel are classified for skin sensitisation when the release rate is minimum 0.5µg Ni/cm²/week.

2.2 Dangerous properties of dust/fumes/mist

Processes which generate particulates from the working of alloys can cause hazards to health or environmental effects. May cause an allergic reaction on contact with skin or by inhalation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Components, classification and concentration

Ingredient	EINICS-number CAS-number Index-number	Symbols (CLP)	Hazard statements* (CLP)	Symbols (EG-class.)	Risk Phrases (EG-class.)*	Concentration (weight %)
Aluminium (Al)	231-072-3 7429-90-5 013-001-00-6	GHS02 Warning	H226	F	R11-15	0-2 %
Chromium (Cr)	231-157-5 7440-47-3 -	GHS06 GHS09 Danger	H300 H310 H332 H410	N, F	R27/28 20 50 53	0-58%
Cobalt (Co)	231-158-0 7440-48-4 027-001-00-9	GHS08 Danger	H317 H334 H413	Xn	R42/43-53	0-70 %

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Copper (Cu)	231-159-6 7440-50-8 -	GHS09 Warning	H410	Xn, N	R20-50/53	0-97 %
Iron (Fe)	231-096-4 7439-89-6 -	GHS02 Danger	H242	O	R7	0.5-99.9 %
Manganese (Mn)	231-105-1 7439-96-5 -	GHS07 GHS09 Warning	H332 H410	Xn, N, F	R11-20- 50/53	0-15 %
Molybdenum (Mo)	231-107-2 7439-98-7 -	GHS02 GHS09 Danger Warning	H225 H400	F, N	R11-50	0-10 %
Nickel (Ni)	231-111-4 7440-02-0 028-002-00-7	GHS06 GHS08 Danger	H317 H331 H351	T	R40-43- 48/23	0-73%
Silicon (Si)	231-130-8 7440-21-3 -	GHS02 Danger	H224	-	R10	0-4.5%
Tin (Sn)	231-141-8 7440-31-5 -	GHS07 GHS09 Danger	H315 H319 H335 H410	F, Xi, N	R11- 36/37/38- 50/53	0-11 %
Vanadium (V)	231-171-1 7440-62-2 -	GHS07 GHS09 Warning	H315 H319 H335 H400	Xi, N	R36/37/38- 50	0-14 %
Zinc (Zn)	231-175-3 7440-66-6 030-001-00-1	GHS02 GHS09 Danger Warning	H250 H410	F, N	R15-17- 50/53	0-16%

*For complete wording of R-phrases and hazard statements 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.

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.

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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

Use 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

Store in a dry environment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 National Exposure Limits

All over 8 hour period unless otherwise stated. Monitoring procedures are not required.

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
	Sweden	NGV	5mg/m ³	respirable
Cobalt	UK	WEL	5mg/m ³	total
	Sweden	NGV	0.1mg/m ³	8hr TWA
Copper	UK	WEL	0.05mg/m ³	total
	UK	WEL	0.2mg/m ³	fume
	Sweden	NGV	1mg/m ³	dusts and mist
	Sweden	NGV	1mg/m ³	total

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Aluminium	UK	WEL	10mg/m ³	8hr TWA
			4mg/m ³	15min
	Sweden	NGV	5mg/m ³	total
			2mg/m ³	respirable

8.2 Control of Exposure

8.2.1 Respiratory protection

Extraction should be used when working with particulate material (dust, fumes, mist). In case of prolonged or frequent exposure to particulates, wear particle filter mask.

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.

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.

11. TOXICOLOGICAL INFORMATION

Effect on humans

Alloys contain nickel and cobalt which carry a risk of producing an allergic reaction following prolonged contact or in already sensitised persons. Particles from the alloy are not judged as acute toxic.

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11.1 Acute toxicity

No LC50 or LD50 has been established for the mixture as a whole.

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

Chromium - Oral LD₅₀ rat 19.8 mg/kg bodyweight (highly toxic)

Cobalt: Oral LD₅₀ rat 1500 mg/kg bodyweight (toxic)

Nickel: Oral LD₅₀ rat 1500 mg/kg bodyweight

11.2 Further information

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

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.

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

The unused product (massive alloy) is not classified as hazardous waste. Dispose in accordance with appropriate government regulations.

Any residues of finely divided product (particles, dust, fumes) are regarded as Hazardous Waste. Contact your local entrepreneur for advice.

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

15.1 General Guidance

Classifications mentioned in table 3.2 concerns substances in their crushed form. Alloys in massive form do not require labelling under current chemical product classification and labelling regulations, if they are not classified as hazardous to health and environment.

15.1.1 Symbol(s)

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15.1.2 R-Phrase(s)

-

15.1.3 S-Phrase(s)

-

15.1.4 H-phrases

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15.1.5 Further information

Contains nickel and cobalt. Alloys in particulate form eg dust, fumes, mist may cause an allergic reaction on contact with skin or if inhaled.

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16. OTHER INFORMATION

16.1 Full text of R-phrases used in Section 3

R7	May cause fire
R10	Flammable
R11	Highly flammable
R15	Contact with water liberates extremely flammable gases
R17	Spontaneously flammable in air
R20	Harmful by inhalation
R27/28	Very toxic in contact with skin and if swallowed
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
R42/43	May cause sensitisation by inhalation and skin contact
R43	May cause sensitisation by skin contact
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R53	May cause long-term adverse effects in the aquatic environment

16.2 Full text of Hazard statements used in Section 3

H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H242	Heating may cause a fire
H250	Catches fire spontaneously if exposed to air
H300	Fatal if swallowed
H310	Fatal in contact with skin
H315	Causes skin irritation
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

16.1 Modifications since previous version

All sections have been modified.

16.2 Sources of information

Contact supplier for detailed reports of sources.

16.3 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.

For any further information, please contact: UDDEHOLM TOOLING AB

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