

## Safety data sheet according to 830/2015/EC

Printing date: 20.04.2016

Revision: 20.04.2016

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Drill Rod and Precision Ground Flat Stock
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
  - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
  - SU21 Consumer uses: Private households / general public / consumers
  - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Application of the substance / the mixture:** Manufactured Article.
- **Uses advised against:** Contact manufacturer.
  
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
  - The L.S. Starrett Company
  - 121 Crescent St.
  - Athol, MA 01331
  - (978) 249-3551
  
- **1.4 Emergency telephone number:**
  - ChemTel Inc.
  - +1 (800)255-3924, +1 (813)248-0585

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - The product is not classified as hazardous according to the CLP regulation.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Not Regulated
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
  
- **Hazard-determining components of labelling:** None.
- **Hazard statements** Not Regulated
- **Additional information:**
  - Contains nickel, cobalt. May produce an allergic reaction.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Components:**
  - None in reportable quantities.

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CAS: 7440-47-3 EINECS: 231-157-5	chromium substance with a Community workplace exposure limit	10-20%
CAS: 7440-44-0 EINECS: 231-153-3	carbon ⚠ Eye Irrit. 2, H319; STOT SE 3, H335	1-2,5%
CAS: 7439-96-5 EINECS: 231-105-1	manganese ⚠ Flam. Sol. 1, H228	1-2,5%
CAS: 7440-50-8 EINECS: 231-159-6	copper substance with a Community workplace exposure limit	0,1-1%
CAS: 7723-14-0 EINECS: 231-768-7 Index number: 015-002-00-7	phosphorus ⚠ Flam. Liq. 2, H225; Flam. Sol. 1, H228 Aquatic Chronic 3, H412	0,1-1%
CAS: 7440-21-3 EINECS: 231-130-8	silicon ⚠ Flam. Sol. 2, H228	0,1-1%
CAS: 7440-33-7 EINECS: 231-143-9	tungsten substance with a Community workplace exposure limit	0,1-1%
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7	nickel ⚠ Carc. 2, H351; STOT RE 1, H372 ⚠ Skin Sens. 1, H317	0,1-<1%
CAS: 7440-48-4 EINECS: 231-158-0 Index number: 027-001-00-9	cobalt ⚠ Resp. Sens. 1, H334; Carc. 2, H351 ⚠ Skin Sens. 1, H317 Aquatic Chronic 4, H413	0,1-<1%

• **Additional information:** For the wording of the listed Hazard Statements refer to section 16.

### SECTION 4: First aid measures

#### • 4.1 Description of first aid measures

• **General information:** No special measures required.

#### • **After inhalation:**

Respiration of particulates is unlikely during normal usage.

Supply fresh air; consult doctor in case of complaints.

#### • **After skin contact:**

Generally the product does not irritate the skin.

Clean with water and soap.

If skin irritation continues, consult a doctor.

#### • **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

#### • **After swallowing:**

Unlikely route of exposure.

Do not induce vomiting; call for medical help immediately.

#### • 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

• **Hazards:** No further relevant information available.

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· **4.3 Indication of any immediate medical attention and special treatment needed**

If necessary oxygen respiration treatment.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information:** No further relevant information available.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions** Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up** Pick up mechanically.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special measures required.
- **Information about fire - and explosion protection:**  
No special measures required.  
The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:** Protect from humidity and water.
- **7.3 Specific end use(s)** No further relevant information available.

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### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

##### · Ingredients with limit values that require monitoring at the workplace:

#### 7440-47-3 chromium

IOELV (EU)	Long-term value: 2 mg/m <sup>3</sup> as Cr
WEL (Great Britain)	Long-term value: 0,5 mg/m <sup>3</sup>
AGW (Germany)	Long-term value: 2 E mg/m <sup>3</sup> 1(I);10, EU

#### 7440-44-0 carbon

WEL (Great Britain)	Long-term value: 10* 4** mg/m <sup>3</sup> *inhalable dust **respirable
AGW (Germany)	Long-term value: 1,25* 10** mg/m <sup>3</sup> 2(II);*alveolengängig**einatembare; AGS, DFG

#### 7439-96-5 manganese

WEL (Great Britain)	Long-term value: 0,5 mg/m <sup>3</sup> as Mn
AGW (Germany)	Long-term value: 0,5E mg/m <sup>3</sup> DFG,Y,10

#### 7439-98-7 molybdenum

MAK (Germany)	vgl.Abschn.IIb und XII
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#### 7440-50-8 copper

WEL (Great Britain)	Short-term value: 2** mg/m <sup>3</sup> Long-term value: 0,2* 1** mg/m <sup>3</sup> *fume **dusts and mists (as Cu)
MAK (Germany)	Long-term value: 0,01 A mg/m <sup>3</sup> als Cu

#### 7723-14-0 phosphorus

WEL (Great Britain)	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>
AGW (Germany)	Long-term value: 0,01 E mg/m <sup>3</sup> 2(II);AGS, Y

#### 7440-62-2 vanadium

MAK (Germany)	einatembare Fraktion; vgl. Abschn. XIII
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#### 7440-21-3 silicon

WEL (Great Britain)	Long-term value: 10* 4** mg/m <sup>3</sup> *inhalable dust **respirable dust
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#### 7440-33-7 tungsten

WEL (Great Britain)	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> as W
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MAK (Germany)	vgl.Abschn.IIb
<b>7440-02-0 nickel</b>	
WEL (Great Britain)	Long-term value: 0,5 mg/m <sup>3</sup> as Ni; Sk; Carc
MAK (Germany)	einatembare Fraktion; vgl.Abschn.XII
<b>7440-48-4 cobalt</b>	
WEL (Great Britain)	Long-term value: 0,1 mg/m <sup>3</sup> as Co; Carc, Sen
MAK (Germany)	einatembare Fraktion; vgl.Abschn.XIII

- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.

· **Ingredients with biological limit values:**

**7439-96-5 manganese**

BGW (Germany)	20 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: bei Langzeitexposition: Nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende Parameter: Mangan
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· **8.2 Exposure controls**

- **Engineering measures** Provide adequate ventilation.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Do not inhale dust / smoke / mist.
- **Respiratory protection:** Use respiratory protection when grinding or cutting material.
- **Protection of hands:**  
Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Eye protection:**



Safety glasses

- **Body protection:** Not required.
- **Limitation and supervision of exposure into the environment:** No special requirements.
- **Risk management measures:** No special requirements.

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### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · Appearance

· Form:	Solid
· Colour:	Grey
· Odour:	Odourless
· Odour threshold:	Not determined.

· pH-value:	Not applicable.
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	>2760 °C (>5000 °F)

· Flash point:	Not applicable.
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· Flammability (solid, gaseous):	Not determined.
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· Auto/Self-ignition temperature:	Not determined.
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· Decomposition temperature:	Not determined.
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· Danger of explosion:	Product does not present an explosion hazard.
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##### · Explosion limits

· Lower:	Not determined.
· Upper:	Not determined.

· Vapour pressure:	Not applicable.
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· Density at 20 °C:	7,6 - 7,8 g/cm <sup>3</sup>
· Relative density:	Not determined.
· Vapour density:	Not applicable.
· Evaporation rate:	Not applicable.

· Solubility in / Miscibility with water:	Insoluble.
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· Partition coefficient (n-octanol/water):	Not determined.
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##### · Viscosity

· Dynamic:	Not applicable.
· Kinematic:	Not applicable.

· 9.2 Other information	No further relevant information available.
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### SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

#### · 10.2 Chemical stability

##### · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

#### · 10.3 Possibility of hazardous reactions

Reacts with strong acids.

Reacts with strong alkali.

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- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials** No further relevant information available.
- **10.6 Hazardous decomposition products** Toxic metal oxide smoke

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:**  
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
- **Serious eye damage/irritation:**  
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:** Vapours have narcotic effect.

· **IARC (International Agency for Research on Cancer):**

7440-02-0   nickel	1
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- **Probable routes of exposure:**  
Skin contact.  
Eye contact.
- **Acute effects (acute toxicity, irritation and corrosivity):** From product as supplied: None.
- **Repeated dose toxicity:** From product as supplied: None.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability**  
Inorganic product, is not eliminable from water by means of biological cleaning processes.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Generally not hazardous for water  
This statement was deduced from the properties of the single components.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Contact waste processors for recycling information.

Smaller quantities can be disposed of with household waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**

- DOT, ADR, IMDG, IATA Not Regulated

- **14.2 UN proper shipping name**

- DOT, ADR, IMDG, IATA Not Regulated

- **14.3 Transport hazard class(es)**

- DOT, ADR, IMDG, IATA
- Class Not Regulated

- **14.4 Packing group**

- DOT, ADR, IMDG, IATA Not Regulated

- **14.5 Environmental hazards:**

- Marine pollutant: No

- **14.6 Special precautions for user**

Not applicable.

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Carcinogenic Categories**

- **IARC (International Agency for Research on Cancer)**

7440-47-3	chromium	3
7440-02-0	nickel	1

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7440-48-4 cobalt

2B

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients are listed.
- **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H225 Highly flammable liquid and vapour.

H228 Flammable solid.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

- **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Sol. 1: Flammable solids, Hazard Category 1

Flam. Sol. 2: Flammable solids, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

- **Sources**

SDS Prepared by:

ChemTel Inc.

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