

## Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and  
GHS

Printing date 19.12.2013

Revision: 19.12.2013

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

- **1.1 Product identifier**
- **Trade name: Band Saw Blades**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Manufactured Article.
- **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.  
(800)255-3924, +1 (813)248-0585

### 2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified according to GHS regulations.  
The product is not classified according to the CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.  
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** N/A
- **Hazard pictograms** N/A
- **Signal word** N/A
- **Hazard-determining components of labelling:** None.
- **Hazard statements** N/A
- **Hazard description:**
- **WHMIS-symbols:** Not hazardous under WHMIS.
- **NFPA ratings (scale 0 - 4)**



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· **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = *0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· **HMIS Long Term Health Hazard Substances**

7440-02-0 | nickel

· **2.3 Other hazards**










· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**  
None in reportable quantities.

CAS: 7439-89-6 EINECS: 231-096-4	iron substance with a Community workplace exposure limit	50-100%
CAS: 7440-47-3 EINECS: 231-157-5	chromium substance with a Community workplace exposure limit	<12%
CAS: 7440-44-0 EINECS: 231-153-3	Carbon	<2%
CAS: 7439-98-7 EINECS: 231-107-2	molybdenum substance with a Community workplace exposure limit	<2%
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7	nickel  T R48/23;  Xn R40;  Xi R43 Carc. Cat. 3 -----  Carc. 2, H351; STOT RE 1, H372  Skin Sens. 1, H317	<2%
CAS: 7440-48-4 EINECS: 231-158-0 Index number: 027-001-00-9	cobalt  Xn R42/43 R53 -----  Resp. Sens. 1, H334  Skin Sens. 1, H317 Aquatic Chronic 4, H413	<2%
CAS: 7439-96-5 EINECS: 231-105-1	manganese  Xn R48	<2%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

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## 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.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 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** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** No further relevant information available.

## 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** No special measures required.
- **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.

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See Section 13 for disposal information.

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## 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.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

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

#### 7439-89-6 iron

EV (Canada)	Long-term value: 1* 5** mg/m <sup>3</sup> as iron;*salts, water-soluble;**welding fume
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#### 7440-47-3 chromium

IOELV (EU)	Long-term value: 2 mg/m <sup>3</sup> as Cr
PEL (USA)	Long-term value: 1* 0,5** mg/m <sup>3</sup> *metal;**inorganic compds., as Cr
REL (USA)	Long-term value: 0,5* mg/m <sup>3</sup> *metal+inorg.compds.as Cr;See Pocket Guide App. C
TLV (USA)	Long-term value: 0,5 mg/m <sup>3</sup>
EL (Canada)	Short-term value: C 0,1*** ppm Long-term value: 0,5* 0,01** 0,025*** mg/m <sup>3</sup> IARC1,ACGIH A1;*metal, inorg. **insol. ;**water-sol.
EV (Canada)	Long-term value: 0,05 mg/m <sup>3</sup>

#### 7440-48-4 cobalt

PEL (USA)	Long-term value: 0,1* mg/m <sup>3</sup> as Co; *for metal dust and fume
REL (USA)	Long-term value: 0,05 mg/m <sup>3</sup> as Co; metal dust & fume

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TLV (USA)	Long-term value: 0,02 mg/m <sup>3</sup> as Co, BEI
EL (Canada)	Long-term value: 0,02 mg/m <sup>3</sup> IARC 2B
EV (Canada)	Long-term value: 0,1 mg/m <sup>3</sup>

**7439-98-7 molybdenum**

PEL (USA)	Long-term value: 5* 15** mg/m <sup>3</sup> as Mo;*soluble compds.,**insol.compds.:total dust
TLV (USA)	Long-term value: 10* 3** mg/m <sup>3</sup> as Mo; *inhalable fraction ** respirable fraction
EL (Canada)	Long-term value: 3* 10** mg/m <sup>3</sup> as Mo; *respirable **inhalable
EV (Canada)	Long-term value: 10* 3** 0,5*** mg/m <sup>3</sup> metal,insol.compd.:*inh,**resp;sol.compd.:***resp

**7440-50-8 copper**

PEL (USA)	Long-term value: 1* 0,1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0,1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0,2** mg/m <sup>3</sup> *dusts and mists; **fume; as Cu
EL (Canada)	Long-term value: 1* 0,2** mg/m <sup>3</sup> *dusts and mists; **fume
EV (Canada)	Long-term value: 0,2* 1** mg/m <sup>3</sup> as copper, *fume;**dust and mists

**7439-96-5 manganese**

PEL (USA)	Short-term value: C 5 mg/m <sup>3</sup> as Mn
REL (USA)	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> fume, as Mn
TLV (USA)	Long-term value: 0,02* 0,1* mg/m <sup>3</sup> as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0,2 mg/m <sup>3</sup> as Mn; R
EV (Canada)	Long-term value: 0,2 mg/m <sup>3</sup> as manganese

- **DNELs** No further relevant information available.
- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making were used as basis.

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- **8.2 Exposure controls**
  - **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.

## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

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

· **pH-value:** Not applicable.

#### Change in condition

Melting point/Melting range:	1582 °C (2880 °F)
Boiling point/Boiling range:	>2760 °C (>5000 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not self-igniting.

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· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density at 20 °C:</b>	7,6 - 7,8 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **10.1 Reactivity**
- **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.
- **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

## 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:**  
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
- **on the eye:**  
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.
- **Sensitization:** No sensitizing effects known.

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· **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

## 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.

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

## 13 Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Contact waste processors for recycling information.

Smaller quantities can be disposed of with household waste.

· **Uncleaned packaging:**

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

## 14 Transport information

· **14.1 UN-Number**

· DOT, ADR, ADN, IMDG, IATA N/A

· **14.2 UN proper shipping name**

· DOT, ADR, ADN, IMDG, IATA N/A

· **14.3 Transport hazard class(es)**

· DOT, ADR, ADN, IMDG, IATA

· Class N/A

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- |   |                 |
|---|-----------------|
| <b>· 14.4 Packing group</b>   |                 |
| <b>· DOT, ADR, IMDG, IATA</b>   | N/A             |
| <b>· 14.5 Environmental hazards:</b>  |                 |
| <b>· Marine pollutant:</b>  | No              |
| <b>· 14.6 Special precautions for user</b>  | Not applicable. |
| <b>· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> |                 |
|   | Not applicable. |
| <b>· UN "Model Regulation":</b>   | -               |

### 15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

**· Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

**· Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

**· TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**· Proposition 65 (California):**

**· Chemicals known to cause cancer:**

References to chemical components listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

7440-02-0 nickel

7440-48-4 cobalt

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Carcinogenic Categories**

**· EPA (Environmental Protection Agency)**

7440-47-3 chromium

D

7439-96-5 manganese

D

7440-50-8 copper

D

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· <b>IARC (International Agency for Research on Cancer)</b>		
7440-48-4	cobalt	2B
7440-02-0	nickel	1

· <b>TLV (Threshold Limit Value established by ACGIH)</b>		
7440-47-3	chromium	A4
7439-98-7	molybdenum	A3
7440-02-0	nickel	A5
7440-48-4	cobalt	A3

· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
7440-02-0	nickel	

· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

· <b>Canada</b>		
· <b>Canadian Domestic Substances List (DSL)</b>		
All ingredients are listed.		

· <b>Canadian Ingredient Disclosure list (limit 0.1%)</b>		
7440-47-3	chromium	
7440-02-0	nickel	
7440-48-4	cobalt	

· <b>Canadian Ingredient Disclosure list (limit 1%)</b>		
7439-96-5	manganese	
7439-98-7	molybdenum	
7440-50-8	copper	
7723-14-0	red phosphorus	
7440-62-2	vanadium	

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

## 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**

H317 May cause an allergic skin reaction.

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

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

H413 May cause long lasting harmful effects to aquatic life.

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 Danger of serious damage to health by prolonged exposure.

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R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

R53 May cause long-term adverse effects in the aquatic environment.

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (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 Harmonized 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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

**Sources**

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