

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 10/31/2019

Reviewed on 10/31/2019

**1 Identification**

- **Product identifier**
- **Trade name:** MICRO-MELT 625
- **Application of the substance / the mixture** Metal working
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Carpenter Technology Corp  
PO Box 14662, Reading, PA 19612  
101 West Bern Street  
READING, PA 19601  
USA
- **Information department:** Health and Safety Department
- **Emergency telephone number:** Call CHEMTREC +1 703-741-5970 / 1-800-424-9300 CCN 842700

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 2 H351 Suspected of causing cancer.

STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
nickel

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cobalt

- **Hazard statements**

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

May cause an allergic skin reaction.

Suspected of causing cancer.

Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

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

- **Dangerous components:**

7440-02-0	nickel	50-100%
7440-47-3	chromium	10-25%
7439-98-7	molybdenum	2.5-10%
7440-48-4	cobalt	≥0.1-<1%

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

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- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Special powder for metal fires. Do not use water.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**

#### · PAC-1:

7440-02-0	nickel	4.5 mg/m <sup>3</sup>
7440-47-3	chromium	1.5 mg/m <sup>3</sup>
7439-98-7	molybdenum	30 mg/m <sup>3</sup>
7439-89-6	iron	3.2 mg/m <sup>3</sup>
7440-03-1	niobium	30 mg/m <sup>3</sup>
7440-48-4	cobalt	0.18 mg/m <sup>3</sup>
7440-32-6	titanium	30 mg/m <sup>3</sup>
7440-21-3	silicon	45 mg/m <sup>3</sup>
7439-96-5	manganese	3 mg/m <sup>3</sup>
7440-50-8	copper	3 mg/m <sup>3</sup>
7440-44-0	carbon	6 mg/m <sup>3</sup>

#### · PAC-2:

7440-02-0	nickel	50 mg/m <sup>3</sup>
7440-47-3	chromium	17 mg/m <sup>3</sup>
7439-98-7	molybdenum	330 mg/m <sup>3</sup>
7439-89-6	iron	35 mg/m <sup>3</sup>

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7440-03-1	niobium	330 mg/m <sup>3</sup>
7440-48-4	cobalt	2 mg/m <sup>3</sup>
7440-32-6	titanium	330 mg/m <sup>3</sup>
7440-21-3	silicon	100 mg/m <sup>3</sup>
7439-96-5	manganese	5 mg/m <sup>3</sup>
7440-50-8	copper	33 mg/m <sup>3</sup>
7440-44-0	carbon	330 mg/m <sup>3</sup>

## · PAC-3:

7440-02-0	nickel	99 mg/m <sup>3</sup>
7440-47-3	chromium	99 mg/m <sup>3</sup>
7439-98-7	molybdenum	2,000 mg/m <sup>3</sup>
7439-89-6	iron	150 mg/m <sup>3</sup>
7440-03-1	niobium	2,000 mg/m <sup>3</sup>
7440-48-4	cobalt	20 mg/m <sup>3</sup>
7440-32-6	titanium	2,000 mg/m <sup>3</sup>
7440-21-3	silicon	630 mg/m <sup>3</sup>
7439-96-5	manganese	1,800 mg/m <sup>3</sup>
7440-50-8	copper	200 mg/m <sup>3</sup>
7440-44-0	carbon	2,000 mg/m <sup>3</sup>

### 7 Handling and storage

## · Handling:

## · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· Information about protection against explosions and fires: Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities

## · Storage:

· Requirements to be met by storerooms and receptacles: Not determined.

· Information about storage in one common storage facility: Not required.

· Further information about storage conditions: Keep receptacle tightly sealed.

· Specific end use(s) No further relevant information available.

### 8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

## · Control parameters

· Components with limit values that require monitoring at the workplace:

7440-02-0 nickel

PEL Long-term value: 1 mg/m<sup>3</sup>

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REL Long-term value: 0.015 mg/m<sup>3</sup>  
as Ni; See Pocket Guide App. A

TLV Long-term value: 1.5\* mg/m<sup>3</sup>  
elemental, \*inhalable fraction

**7440-47-3 chromium**

PEL Long-term value: 1 mg/m<sup>3</sup>

REL Long-term value: 0.5\* mg/m<sup>3</sup>  
\*metal+inorg.compds.as Cr; See Pocket Guide App. C

TLV Long-term value: 0.003\* 0.5\*\* mg/m<sup>3</sup>  
inh. fraction, \*as Cr(III), \*\*metal

**7439-98-7 molybdenum**

PEL Long-term value: 15\* mg/m<sup>3</sup>  
\*Total dust, as Mo

TLV Long-term value: 10\* 3\*\* mg/m<sup>3</sup>  
as Mo; \*inhalable fraction \*\* respirable fraction

**7440-48-4 cobalt**

PEL Long-term value: 0.1\* mg/m<sup>3</sup>  
as Co; \*for metal dust and fume

REL Long-term value: 0.05 mg/m<sup>3</sup>  
as Co; metal dust & fume

TLV Long-term value: 0.02\* mg/m<sup>3</sup>  
\*inh. fraction; DSEN, RSEN, BEI

**Ingredients with biological limit values:****7440-48-4 cobalt**

BEI 15 µg/L  
Medium: urine  
Time: end of shift at end of workweek  
Parameter: Cobalt (background)

1 µg/L  
Medium: blood  
Time: end of shift at end of workweek  
Parameter: Cobalt (background, semi-quantitative)

**Additional information:** The lists that were valid during the creation were used as basis.

**Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

**Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Powder

Solid

Color:

According to product specification

- **Odor:**

Characteristic

- **Odor threshold:**

Not determined.

- **pH-value:**

Not applicable.

- **Change in condition**

Melting point/Melting range:

Undetermined.

- **Flash point:**

Not applicable.

- **Flammability (solid, gaseous):**

Not determined.

- **Decomposition temperature:**

Not determined.

- **Auto igniting:**

Product is not selfigniting.

- **Danger of explosion:**

Not determined.

- **Explosion limits:**

Lower:

Not determined.

Upper:

Not determined.

- **Vapor pressure:**

Not applicable.

- **Density at 20 °C (6820 °F):**

8.52787 g/cm<sup>3</sup> (71.16508 8.52787 lbs/gal)

- **Relative density**

Not determined.

- **Vapor density**

Not applicable.

- **Evaporation rate**

Not applicable.

- **Solubility in / Miscibility with**

Water:

Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic:

Not applicable.

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<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>VOC content:</b>	0.00 %
<b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No further relevant information available.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Metal oxide fumes

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

<b>7440-48-4 cobalt</b>	
Oral	LD50 6,170 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
- **Additional toxicological information:**
- The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

7440-02-0	nickel	
7440-47-3	chromium	2B
7440-48-4	cobalt	3
		2B

- **NTP (National Toxicology Program)**

7440-02-0	nickel	
7440-48-4	cobalt	R
		R

- **OSHA-Ca (Occupational Safety & Health Administration)**
- None of the ingredients is listed.

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### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system.*  
*Danger to drinking water if even small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |                        |
|--|------------------------|
| · <b>UN-Number</b>   |                        |
| · <b>DOT, IMDG, IATA</b>   | <i>not regulated</i>   |
| · <b>UN proper shipping name</b>   |                        |
| · <b>DOT, IMDG, IATA</b>   | <i>not regulated</i>   |
| · <b>Transport hazard class(es)</b>  |                        |
| · <b>DOT, ADN, IMDG, IATA</b>  |                        |
| · <b>Class</b>   | <i>not regulated</i>   |
| · <b>Packing group</b>   |                        |
| · <b>DOT, IMDG, IATA</b>   | <i>not regulated</i>   |
| · <b>Environmental hazards:</b>  | <i>Not applicable.</i> |
| · <b>Special precautions for user</b>  | <i>Not applicable.</i> |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | <i>Not applicable.</i> |
| · <b>UN "Model Regulation":</b>  | <i>not regulated</i>   |

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### 15 Regulatory information

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

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

None of the ingredients is listed.

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

7440-02-0 nickel

7440-47-3 chromium

7440-48-4 cobalt

7439-96-5 manganese

7440-50-8 copper

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

7440-02-0 nickel

ACTIVE

7440-47-3 chromium

ACTIVE

7439-98-7 molybdenum

ACTIVE

7439-89-6 iron

ACTIVE

7440-03-1 niobium

ACTIVE

7440-48-4 cobalt

ACTIVE

7440-32-6 titanium

ACTIVE

7440-21-3 silicon

ACTIVE

7439-96-5 manganese

ACTIVE

7440-50-8 copper

ACTIVE

#### · Hazardous Air Pollutants

7440-48-4 cobalt

7439-96-5 manganese

#### · Proposition 65

#### · Chemicals known to cause cancer:

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

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· TLV (Threshold Limit Value established by ACGIH)	
7440-02-0	nickel
7440-47-3	chromium
7439-98-7	molybdenum
7440-48-4	cobalt

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

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

nickel  
cobalt

- **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing cancer.  
Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
If on skin: Wash with plenty of water.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
If exposed or concerned: Get medical advice/attention.  
Specific treatment (see on this label).  
Get medical advice/attention if you feel unwell.  
If skin irritation or rash occurs: Get medical advice/attention.  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Wash contaminated clothing before reuse.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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.

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- **Department issuing SDS:** Environment protection department.
- **Date of preparation / last revision** 10/31/2019 / -
- **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
  - 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)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - BEI: Biological Exposure Limit
  - Resp. Sens. 1: Respiratory sensitisation – Category 1
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Carc. 2: Carcinogenicity – Category 2
  - STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

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