

## Section 1: Identification of the Substance/Mixture and of the Company Undertaking

**Product Name:** TYPE 302/304 STAINLESS  
**Trade Name:** TYPE 302/304 STAINLESS  
**Product Uses:** Application of the substance / the mixture Metal working

**Other Phone:** · Information department: Health and Safety Department

**Revision Date:** 06/13/201  
Date of preparation / last revision 07/11/2015 / 1

**Notes from Section 1:** acc. to OSHA HCS

## Section 2: Hazards Identification



**Signal Words:** Danger

**GHS Class (OSHA HCS):** Classification of the substance or mixture  
d~ 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).

GHS08

Hazard-determining components of labeling: nickel  
cobalt

**Precautionary Statements:**

- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P284 - Wear respiratory protection.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P264 - Wash thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P321 - Specific treatment (see on this label)
- P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- P363 - Wash contaminated clothing before reuse.
- P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308+P313 - IF exposed or concerned: Get medical advice/attention.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P314 - Get medical advice/attention if you feel unwell.
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P405 - Store locked up.
- P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

**Note:**

- 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.

**Other hazards**

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable

**Notes from Section 2:**

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions

Section 3: Composition/Information on Ingredients

Ingredient Name	CAS Number	Ingredient Percent	EC Number	Comments
chromium	7440-47-3	10-<25%		
nickel	7440-02-0	2.5-<10%		
cobalt	7440-48-4	0.1-<1%		
manganese	7439-96-5	0.1-<2.5%		

**Comments:**

- 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.

**Other hazards**

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable

## Section 4: First Aid Measures

Inhalation:	Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation
Skin Contact:	Immediately wash with water and soap and rinse thoroughly.
Eye Contact:	Rinse opened eye for several minutes under running water.
Ingestion:	If symptoms persist consult doctor.
Notes from Section 4:	<ul style="list-style-type: none"><li>· General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Most important symptoms and effects, both acute and delayed No further relevant information available</li><li>· Indication of any immediate medical attention and special treatment needed No further relevant information available.</li></ul>

## Section 5: Firefighting Measures

Fire:	Flammability (solid, gaseous): Not determined
Explosion:	Danger of explosion: Product does not present an explosion hazard.
Flash Point:	Not applicable
Auto Ignition Temperature:	Product is not selfigniting
Upper Flammable Limit:	Not determined
Lower Flammable Limit:	Not determined
Extinguishing Media:	The product is not flammable
Protective Equipment:	No special measures required
Notes from Section 5:	Special hazards arising from the substance or mixture No further relevant information available.

## Section 6: Accidental Release Measures

Personnel Precautions:	Personal precautions, protective equipment and emergency procedures Not required
Environmental Precautions:	No special measures required.
Methods for Containment:	No special measures required.
Methods for Cleanup:	No special measures required.
Notes from Section 6:	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

Handling:	Precautions for safe handling Not applicable. Information about protection against explosions and fires: Not applicable.
Storage:	



Conditions for safe storage, including any incompatibilities  
 Requirements to be met by storerooms and receptacles: No special requirements.  
 · Information about storage in one common storage facility: Not required.  
 · Further information about storage conditions: None.

**Hygiene Practices:** Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.

**Notes from Section 7:** Specific end use(s) No further relevant information available.

## Section 8: Exposure Controls/Personal Protection

**Eye Protection:** Safety glasses

**Respiratory Protection:** 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.

**Hand Protection:** Protective gloves 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. 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

**Hygiene Practices:** Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.

**Notes from Section 8:** Additional information about design of technical systems: No further data; see item 7  
 Additional information: The lists that were valid during the creation were used as basis.

### Exposure Guidelines - Ingredient Based:

#### chromium:

Components with limit values that require monitoring at the workplace: PEL Long-term value: 1\* 0.5\*\* mg/m<sup>3</sup>  
 \*metal;\*\*inorganic compds., as Cr 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: 0.5 mg/m<sup>3</sup>

#### nickel:

Components with limit values that require monitoring at the workplace: PEL Long-term value: 1 mg/m<sup>3</sup>  
 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

Components with limit values that require monitoring at the workplace: PEL Ceiling limit value: 5 mg/m<sup>3</sup> as Mn  
 REL Short-term value: 3 mg/m<sup>3</sup>  
 Long-term value: 1 mg/m<sup>3</sup> fume, as Mn

TLV Long-term value: 0.02\* 0.1\* mg/m<sup>3</sup>  
as Mn; \*respirable \*\*inhalable fraction

**manganese:**

Components with limit values that  
require monitoring at the  
workplace:

PEL Ceiling limit value: 5 mg/m<sup>3</sup> as Mn  
REL Short-term value: 3 mg/m<sup>3</sup>  
Long-term value: 1 mg/m<sup>3</sup> fume, as Mn  
TLV Long-term value: 0.02\* 0.1\* mg/m<sup>3</sup>  
as Mn; \*respirable \*\*inhalable fraction

Section 9: Physical and Chemical Properties

Physical State:	Form: Solid
Color:	According to product specification
Odor:	Characteristic
Odor Threshold:	Not determined.
pH:	Not applicable.
Melting Temperature:	Undetermined
Boiling Temperature:	2672 °C (4842 °F)
Flash Point:	Not applicable
Evaporation Rate:	Not applicable
Upper Flammable Limit:	Not determined
Lower Flammable Limit:	Not determined
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Density:	20 °C (68 °F): 7.77349 g/cm <sup>3</sup> (64.87 lbs/gal) Relative density Not determined.
Solubility In Water:	Insoluble.
Octanol Water Partition Coef:	Not determined.
Auto Ignition Temperature:	Product is not selfigniting
Decomposition Temperature:	Not determined
Viscosity:	Dynamic: Not applicable. Kinematic: Not applicable.
Note from Section 9:	Organic solvents: 0.0 % Solids content: 99.9 % · Other information No further relevant information available.

Section 10: Stability and Reactivity

Reactivity:	No further relevant information available Possibility of hazardous reactionsNo dangerous reactions known.
Conditions To Avoid:	No further relevant information available
Incompatible Materials:	No further relevant information available

**Hazardous Decomposition Products:** No dangerous decomposition products known.

**Notes from Section 10:** Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

#### Section 11: Toxicological Information

**Sensitization:** Sensitization possible through skin contact

**OSHA Carcinogen:** None of the ingredients is listed.

**Irritation:** on the skin: No irritant effect.  
on the eye: No irritating effect.

**Notes from Section 11:** Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

##### chromium:

IARC Carcinogen: 3

##### cobalt:

IARC Carcinogen: 2B

Ingestion Toxicity: Oral LD50 6170 mg/kg (rat)

##### nickel:

IARC Carcinogen: 1

NTP Carcinogen: R

#### Section 12: Ecological Information

**Biodegradation:** No further relevant information available

**BioAccumulation:** No further relevant information available

**Effect of Material On Aquatic:** No further relevant information available

**Mobility In Environmental Media:** No further relevant information available

**Notes from Section 12:** 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.



## Section 13: Disposal Considerations

<b>Waste Disposal:</b>	Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
<b>Notes from Section 13:</b>	Recommendation: Disposal must be made according to official regulations.

## Section 14: Transport Information

<b>DOT Shipping Name:</b>	not regulated
<b>DOT UN Number:</b>	not regulated
<b>DOT Hazard Class:</b>	not regulated
<b>DOT Packing Group:</b>	not regulated
<b>IMDG Shipping Name:</b>	not regulated
<b>IMDG UN Number:</b>	not regulated
<b>IMDG Hazard Class:</b>	not regulated
<b>IMDG Packing Group:</b>	not regulated
<b>IATA Shipping Name:</b>	not regulated
<b>IATA UN Number:</b>	not regulated
<b>IATA Hazard Class:</b>	not regulated
<b>IATA Packing Group:</b>	not regulated
<b>RID/ADR Shipping Name:</b>	ADN : not regulated
<b>RID/ADR UN Number:</b>	ADN : not regulated
<b>RID/ADR Hazard Class:</b>	ADN : not regulated
<b>RID/ADR Packing Group:</b>	ADN : not regulated
<b>Notes from Section 14:</b>	<p>Environmental hazards:</p> <ul style="list-style-type: none"> <li>· Marine pollutant: No</li> <li>· Special precautions for user Not applicable.</li> <li>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.</li> <li>· UN "Model Regulation":</li> </ul>

## Section 15: Regulatory Information

**Regulatory - Product Based:**

NIOSH-Ca (National Institute for Occupational Safety and Health):

7440-02-0 nickel

GHS label element:

The product is classified and labeled according to the Globally Harmonized System (GHS)

Carcinogenic categories:

7723-14-0: red phosphorus  
EPA (Environmental Protection Agency) : D

Section 355 (extremely hazardous substances)::

7723-14-0: red phosphorus

Section 313 (Specific toxic chemical listings):

7440-47-3 chromium  
7440-02-0 nickel  
7439-96-5 manganese  
7440-48-4 cobalt  
7723-14-0 red phosphorus

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Precautionary statements:

Do not breathe dust/fume/gas/mist/vapors/spray. Wear respiratory protection.  
Wear protective gloves.  
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.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Specific treatment (see on this label).  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Wash contaminated clothing before reuse.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
If exposed or concerned: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
Get medical advice/attention if you feel unwell.  
If on skin: Wash with plenty of water.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regul

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.

Chemical safety assessment::

A Chemical Safety Assessment has not been carried out.

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.

**Regulatory - Ingredient Based:****chromium:**

Carcinogenic categories EPA (Environmental Protection Agency) : D :

**manganese:**

Carcinogenic categories EPA (Environmental Protection Agency) : D :

## Section 16: Additional Information

**Revision Date:** 06/13/201  
 Date of preparation / last revision 07/11/2015 / 1

**Author:** Department issuing SDS: Environment protection department.

**Disclaimer:** 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

**Notes from Section 16:** 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)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1  
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
 Carc. 2: Carcinogenicity, Hazard Category 2  
 STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

· \* Data compared to the previous version altered.

**HMIS:**

Health	
Flammability	
<b>Reactivity</b>	
<b>PPE</b>	

Chronic Health Hazard

