

Polarex Stainless Steel Cladding Technical and Safety Data Sheet

Polarex 304 Grad Stainless Steel is typically used in architectural fabrication and trims. Polarex offers the product in the form of sheets and trims.

Product Technical Data

Attribute	Value
Density	8.00 g/cm ³
Melting Point	1450 °C
Thermal Expansion	17.2 x10 ⁻⁶ /k
Modulus of Elasticity	193GPa
Thermal Conductivity	16.2 W/m.k
Proof Stress 45 Min %	210 Min MPa Tensile Strength
Mechanical Properties	EN10088-2:2005 up to 8mm
Proof Stress	230 Min Mpa
Tensile Strength	540 to 750 Mpa
Elongation A50 mm	45 Min %
Electrical Resistivity	0.072 x10 ⁻⁶ Ω .m, 520 to 720 MPa longation A50 mm

The physical data given in the table were determined on the test specimens under defined conditions and represent averages values from a relatively large number of measurements. The values measured on test specimens can't be used without restriction for a prediction of the properties of finished articles, since processing and shaping have an influence on the properties.

Safety Data

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Commercial Product Name: Stainless Steel 304

1.2. Relevant identified uses of the substance or mixture and uses advised against

Specific use(s): typical uses include architectural flashings and trims, kitchen equipment, welded components of chemical, food and pharmaceutical processing equipment.

1.3. Details of the supplier of the safety data sheet

As sheet

1.4. Emergency telephone number

Emergency telephone number: As Sheet

2. HAZARDS IDENTIFICATION

These products are not hazardous unless processed (i.e. ground, welded) in a manner that generates dust or fumes. Dust and fumes may cause eye, skin and respiratory irritation. May cause skin and respiratory tract sensitization (allergic reaction). Prolonged inhalation of dust or fumes from this product may cause perforation of the nasal septum and lung damage. This product contains nickel which may cause cancer.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- Chromium Cas no 7440-47-3 10.5-19.5%
- Molybdenum Cas no 7439-98-7 0-2.5%
- Manganese Cas no 7439-96-5 0-1.25%
- Silicon Cas no 7440-21-3 0-1.0%
- Nickel Cas no 7440-02-0 0-0.75%
- Copper Cas no 7440-50-8 0-0.6%
- Cobalt Cas no 7440-48-4 0-0.6%
- Iron Cas no 7439-89-6 Balance

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Not applicable in solid form. Inhalation of dust or fumes from grinding, cutting and welding operations is unlikely to generate the need for first aid.

Skin contact: There are no special symptoms or effects associated with stainless steel. In the event of physical injury to the skin seek appropriate medical attention.

Eye contact: In the event of physical injury to the eyes, seek immediate medical attention. Stainless steel particles are non-magnetic or only slightly magnetic and may not respond to magnet placed over the eye, medical treatment must be sought immediately.

Ingestion: Does not apply in solid form. Rinse mouth. Consult medical attention if necessary.

Additional advice : Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Solid form : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For fires involving fine dust or filings, do not use water, CO₂ or foam directly on the burning metal. Use dry sand, dry chemical or other material for class D fire..

5.2. Special hazards arising from the substance or mixture

Specific hazards: None recorded

5.3. Advice for firefighters

In the event of fire, appropriate respiratory protective equipment should be used by fire fighters.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear personal protective equipment.

6.2. Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up: Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling: Do not breathe dust or fumes from processing. Avoid contact with dust. Wear protective clothing and equipment. Process only with adequate ventilation. Do not eat, drink or smoke in work area.

7.2. Conditions for safe storage, including any incompatibilities

Storage: Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

8. CONTROL PARAMETERS

Exposure controls

Respiratory protection: Not needed under normal circumstances. If the occupational exposure limits are exceeded during processing, an approved respirator should be used.

Hand protection: Wear protective gloves to prevent cuts and other injuries.

Eye protection: Wear safety glasses or other eye protection consistent with safety practice for the process being performed.

Skin and body protection: Overalls, apron and boots recommended. The molten product can cause serious burns. Flame retardant anti-static protective clothing should be worn.

Engineering measures: Use only in area provided with appropriate exhaust ventilation. Ensure that eyewash stations and safety showers are close to the workstation location. Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapours.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: solid

Colour: no data available

Odour: Odourless

Density: 7.7-8.3 g/cm³

Melting point: 1325 to 1530 °C

Water Solubility: 1325 to 1530 °C

Specific Gravity: 0.27—0.30

9.2. Other information

No data available

10. STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: Stable in normal conditions

10.2. Chemical stability

Stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Toxic metal fumes and oxides are emitted when product is heated above melting point.

10.4. Conditions to avoid

Conditions to avoid: None Known.

11. TOXICOLOGICAL INFORMATION

Data shows as non toxic, unless heated above melting point.

12. ECOLOGICAL INFORMATION

No known harmful effects.

13. DISPOSAL CONSIDERATIONS

Surplus and scrap/waste stainless should be recycled through an authorised recycling merchant.

14. TRANSPORT INFORMATION

No transport regulation applicable

15. REGULATORY INFORMATION

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

15.1.1. EU-Regulations Supplied to CPR 305/2011 and BS EN 10088 -4/5 Authorisations (REACH) : Not applicable.

15.1.2. National regulations No data.

15.2. Chemical Safety Assessment Chemical Safety Assessment : Coated steel products are classed as articles and not substances, and as such not subject to assessment.

16. OTHER INFORMATION

16.1 HMIS Hazard rating: Health-0 Fire Hazard -0 Physical Hazard - 0

16.2 EU Preparation Classification: Xn (harmful);R40,R42,R48/23,R53

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