

SAFETY DATA SHEET

According to Regulation EC No. 1907/2006

Hot Rolled Carbon Steel Reinforcing Bars



1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Product name Hot Rolled Carbon Steel Reinforcing Bars

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

1.2.1. Relevant identified uses of the substance

building&construction

1.2.2. Uses advised against

No uses specifically advised against.

1.3. Details of the supplier of the safety data sheet

Company name Kroman Çelik Sanayii A.Ş.

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Tel +90 (262) 679 20 00

Fax +90 (262) 653 26 76

E-mail kalite@kromancelik.com

1.4. Emergency telephone numbers

Company Info Desk +90 (262) 679 20 00

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS];

The product is not classified as hazardous according to Regulation 1272/2008 (CLP).

Classification according to 67/548/EEC [DSD] or 1999/45/EC [DPD];

The product is not classified as hazardous according to Directive 67/548/EEC (DSD) or Directive 1999/45/EC (DPD).

2.2. Label Elements

The product does not need to be labelled according to Directive 67/548/EEC (DSD), Directive 1999/45/EC (DPD) and Regulation (EC) No 1272/2008 (CLP).

2.3. Other hazards

Result of PBT and vPvB assessment: No data available

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2.4. Additional information

Please look over section 11 for toxicological information. Full text of R-, H- and EUH-phrases: see section 16.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance/Mixture

| Name | CAS No EC No | % | Classification DSD | Classification CLP |
|-------------------------------|------------------------|---------------|-------------------------|---|
| Iron (as iron oxide fume) | 1309-37-1 215-168-2 | - | Not classified | Not classified |
| Carbon (as carbon dioxide) | 124-38-9 204-696-9 | - | Not classified | Not classified |
| Manganese | 7439-96-5 231-105-1 | - | Not classified | Not classified |
| Phosphorus | 7723-14-0 231-768-7 | Max. 0,075 | F; R11 R16 R52-53 | Flam. Sol. 1; H228 Aquatic Chronic 3; H412 |
| Sulfur (as sulfur dioxide) | 7446-09-5 231-195-2 | - | T; R23 C; R34 | Skin Corr. 1B; H314 Acute Tox. 3; H331 |
| Silicon | 7440-21-3 231-130-8 | - | Not classified | Not classified |
| Copper (as fume) | 7440-50-8 231-159-6 | - | Not classified | Not classified |
| Vanadium (as fume) | 7440-62-2 231-171-1 | - | Not classified | Not classified |
| Nickel | 7440-02-0 231-111-4 | - | Not classified | Not classified |
| Tin (inorganic) | 7440-31-5 231-141-8 | - | Not classified | Not classified |

3.2. Additional Information

See Section 16 for the full text of the R phrases or H/EUH statements declared above.

4. FIRST AID MEASURES

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4.1. Description of first aid measures

Eye contact

Check for and remove any contact lenses. Rinse out with water with the eyelid held wide open. Get medical attention if irritation persists.

Skin contact

Flush skin with large amounts of soap and water.

Inhalation

Not applicable.

Ingestion

Do NOT induce vomiting. Rinse out mouth. Never give anything by mouth to an unconscious person. Call for medical help.

4.2. Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3. Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable: Water, alcohol resistant foam, CO₂, dry chemical powder. For molten metal use class D chemical.

Unsuitable: No data available

5.2. Special hazards arising from the substance or mixture

The product in the solid state are not considered to be a fire hazard.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing in case of fire. Avoid breathing fire mists/fumes.

6. ACCIDENTAL RELEASE MEASURES

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6.1. Personal precautions, protective equipment and emergency procedures

Keep unnecessary and unprotected personnel from entering. Wear appropriate personal protective equipment as described in Section 8. Follow the advice for safe handling and use given in Section 7.

6.2. Environmental protection measures

Keep from entering to water and ground water systems. Contain spillage where possible and safe to do so.

6.3. Methods and material for containment and cleaning up

Collect the material and put in an appropriate waste disposal container for recycle.

6.4. Reference to other sections

Review safety handling information in Section 7, personal protection measures in Section 8 and disposal measures in Section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective measures: Avoid breathing of and contact with fumes and dusts during processing. No specific requirements for solid formed steel product.

Hygiene measures: Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry place and keep away from incompatible materials.

7.3. Specific end uses

No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

Iron oxide

ACGIH : 5 mg/m³ TWA (respirable fraction)

OSHA : 10 mg/m³ TWA (fume)

NIOSH : 5 mg/m³ TWA (dust and fume, as Fe)

Manganese

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ACGIH : 0.2 mg/m³ TWA

OSHA : 1 mg/m³ TWA (fume)

3 mg/m³ STEL (fume)

5 mg/m³ Ceiling

NIOSH : 1 mg/m³ TWA (fume)

3 mg/m³ STEL

Copper

ACGIH : 0.2 mg/m³ TWA (fume); 1 mg/m³ TWA (dust and mist, as Cu)

OSHA : 0.1 mg/m³ TWA (dust, fume, mists, as Cu)

NIOSH : 1 mg/m³ TWA (dust and mist)

Carbon dioxide

ACGIH : 5000 ppm TWA

30000 ppm STEL

OSHA : 10000 ppm TWA; 18000 mg/m³ TWA

30000 ppm STEL; 54000 mg/m³ STEL

NIOSH : 5000 ppm TWA; 9000 mg/m³ TWA

30000 ppm STEL; 54000 mg/m³ STEL

Nickel

ACGIH : 1.5 mg/m³ TWA (inhalable fraction)

OSHA : 1 mg/m³ TWA

NIOSH : 0.015 mg/m³ TWA

Silicon

OSHA : 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

NIOSH : 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable dust)

Tin

ACGIH : 2 mg/m³ TWA

OSHA : 2 mg/m³ TWA

NIOSH : 2 mg/m³ TWA

Sulfur dioxide

ACGIH : 2 ppm TWA

5 ppm STEL

OSHA : 2 ppm TWA; 5 mg/m³ TWA

5 ppm STEL; 15 mg/m³ STEL

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NIOSH : 2 ppm TWA; 5 mg/m³ TWA

5 ppm STEL; 13 mg/m³ STEL

Phosphorus

OSHA : 0.1 mg/m³ TWA

NIOSH : 0.1 mg/m³ TWA

Vanadium

ACGIH : 0.05 mg/m³ TWA (dust or fume, respirable fraction)

NIOSH : 0.05 mg/m³ Ceiling (15 min, dust and fume, as V)

Derived effect levels

No data available for product.

Predicted effect concentrations

No data available for product.

8.2. Exposure controls

Personal protective equipment



Respiratory Protection:

No respiratory protection is required.

Eye/Face Protection:

Wear safety glasses; chemical goggles for fumes which may arise from thermal processing.

Hand Protection:

Wear protective gloves with EN 374 standard.

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Environmental exposure controls

Should not be released into the environment. Prevent product from entering drains.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

| | |
|-----------------------|---------------------------|
| Appearance | : Solid |
| Color | : grey |
| Odor | : Metallic - Odorless |
| pH | : Not applicable |
| Melting point | : 1536 °C |
| Boiling point | : Not applicable |
| Flash point | : Not applicable |
| Flammable properties | : Not flammable |
| Vapor pressure | : Not applicable |
| Water solubility | : Not soluble |
| Density | : 7,85 gr/cm ³ |
| Viscosity | : Not applicable |
| Partition coefficient | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

No additional information available

10. STABILITY AND REACTIVITY

10.1. Reactivity

The product is not reactive under recommended storage and handling conditions.

10.2. Chemical stability

The product is stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Strong oxidizing agents and strong acids.

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10.6. Hazardous decomposition products

Metal fumes if heated. Above the melting point, iron oxide fumes may be present

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Iron oxide

Oral LD50 Rat: >10000 mg/kg

Manganese

Oral LD50 Rat: 9 g/kg

Nickel

Oral LD50 Rat: >9000 mg/kg

Silicon

Oral LD50 Rat: 3160 mg/kg

Sulfur dioxide

Inhalation LC50 Rat: 2500 ppm/1h

Phosphorus

Inhalation LC50 Rat: 4.3 mg/L/1h

Oral LD50 Rat: 3.03 mg/kg

Dermal LD50 Rat: 100 mg/kg

Vanadium

Inhalation LC50 Rat: 2.21 mg/L/4h

Oral LD50 Rat: 10 mg/kg

Dermal LD50 Rat: >2500 mg/kg

Skin corrosion/irritation

Not irritant to skin

Serious eye damage/irritation

Not irritant to eyes

Sensitization

Not sensitizing

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Carcinogenicity

Iron oxide

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Supplement 7 [1987], Monograph 1 [1972] (Group 3 (not classifiable))

Nickel

ACGIH: A5 - Not Suspected as a Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)

IARC: Monograph 49 [1990], Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

Sulfur dioxide

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 54 [1992] (Group 3 (not classifiable))

Vanadium

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 86 [2006] (Group 2B (possibly carcinogenic to humans))

Mutagenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

Manganese, copper and nickel have been reported to have adverse reproductive effects in experimental animals. Copper and nickel have been shown to be fetotoxic in experimental animals.

Specific target organ toxicity (single exposure)

No data available

Specific target organ toxicity (repeated exposure)

No data available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

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Not applicable for solid steel products. Finely divided product, based on its components, will be hazardous to fish, animals, plants and the environment if released, the degree of which would depend on the particle size and quantity released.

12.2. Persistence and degradability

This material may persist in the environment for long periods, based upon its corrosion resistant, insoluble, and non-biodegradable properties.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Methods of disposal

Metal wastes should be recycled. Follow safe solid waste disposal guidelines in accordance with federal, state and local regulations.

13.2. European waste catalogue (EWC)

According to the European Waste Catalogue, waste codes are not product specific, but application specific. Waste codes should be assigned by the user.

13.3. Contaminated packaging

No data available

14. TRANSPORT INFORMATION

14.1. General information

The product is not regulated under UN ADR/RID, ADNR, IMDG and IATA lists.

14.2. UN number

Not relevant

14.3. UN proper shipping name

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Not relevant

14.4. Transport hazard class(es)

Not relevant

14.5. Packing group

Not relevant

14.6. Environmental hazards

Not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

15. REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006, (REACH),
- Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006,
- Council Directive 67/548/EEC, (DSD),
- Regulation (EC) No 1272/2008 (CLP),
- Commission Directive 2006/15/EC,
- Commission Directive 2000/39/EC
- Council Directive 91/689/EEC,
- ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

16. OTHER INFORMATION

16.1. Indication of changes to the previous revision

Date Prepared : February 27th, 2015

Revision No : 0

Revision Date : -

16.2. Abbreviations and acronyms

ACGIH : American Conference of Governmental Industrial Hygienists

ADNR : Regulation for the Carriage of Dangerous Substances on the Rhine

ADR : European Agreement Concerning the Int. Carriage of Dangerous Goods by Road

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CAS No : Chemical Abstract Service Index Number
CLP : Regulation of Classification, Labelling and Packaging of Chemicals
DNEL : Derived No Effect Level
DPD : Dangerous Preparations Directive
DSD : Dangerous Substances Directive
EC No : European Commission Number
GHS : Globally Harmonized System of Classification and Labeling Of Chemicals
IARC : International Agency for Research on Cancer
IATA : International Air Transport Association
ICAO : International Civil Aviation Organization
IMDG : International Maritime Code for Dangerous Goods
NIOSH : National Institute for Occupational Safety and Health
NTP : National Toxicology Program
OSHA : Occupational Safety and Health Administration
RID : International Rule for Transport of Dangerous Substances by Railway
STEL : Short-term Exposure Limit
TWA : Time Weighted Average
vPvB : Very Persistent, Very Bioaccumulative

16.3. Further Information

The information contained within this Safety Data Sheet is believed to be accurate and have been compiled from sources believed to be reliable. It is offered for consideration, investigation and verification. It is the user's responsibility to follow the guidelines as outlined within this SDS. The user assumes all risk of use, storage and handling in compliance with applicable laws and regulations.