

**GERDAU**

# Carbon and Alloy Steels

8583510

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

#### 1.1. Product identifier

Product form : Mixture  
 Product name : Carbon and Alloy Steels

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

#### 1.3. Details of the supplier of the safety data sheet

Gerdau Long Steel North America  
 4221 West Boy Scout Blvd.  
 Suite 600  
 Tampa, 33607  
 T (800) 876-3626

#### 1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

|              |      |
|--------------|------|
| Skin Sens. 1 | H317 |
| Carc. 1B     | H350 |
| STOT RE 1    | H372 |

Full text of H-statements: see section 16

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H317 - May cause an allergic skin reaction  
 H350 - May cause cancer  
 H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P260 - Do not breathe dust, fume  
 P261 - Avoid breathing dust, fume  
 P264 - Wash hands thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P272 - Contaminated work clothing must not be allowed out of the workplace  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P302+P352 - If on skin: Wash with plenty of water  
 P308+P313 - If exposed or concerned: Get medical advice/attention  
 P314 - Get medical advice/attention if you feel unwell  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P362+P364 - Take off contaminated clothing and wash it before reuse  
 P405 - Store locked up  
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

Not applicable

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

| Name         | Product identifier | %   | GHS-US classification                                   |
|--------------|--------------------|-----|---------------------------------------------------------|
| Nickel       | (CAS No) 7440-02-0 | < 2 | Skin Sens. 1, H317<br>Carc. 1B, H350<br>STOT RE 1, H372 |
| Carbon black | (CAS No) 1333-86-4 | < 1 | Carc. 2, H351                                           |

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow breathing of fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Get medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries after inhalation : May cause an allergic skin reaction.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing dust, fume. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fume. Provide local exhaust or general room ventilation.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a dry place. Store in a well-ventilated place. Keep cool.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : None known.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

| Carbon and Alloy Steels  |                        |                                |
|--------------------------|------------------------|--------------------------------|
| ACGIH                    | Not applicable         |                                |
| OSHA                     | Not applicable         |                                |
| Nickel (7440-02-0)       |                        |                                |
| ACGIH                    | ACGIH TWA (mg/m³)      | 1.5 mg/m³ (inhalable fraction) |
| OSHA                     | OSHA PEL (TWA) (mg/m³) | 1 mg/m³                        |
| Carbon black (1333-86-4) |                        |                                |
| ACGIH                    | ACGIH TWA (mg/m³)      | 3 mg/m³ (inhalable fraction)   |
| OSHA                     | OSHA PEL (TWA) (mg/m³) | 3.5 mg/m³                      |

#### 8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Other information : Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Colour : Metallic Silver Grey
- Odour : odourless
- Odour threshold : No data available
- pH : No data available
- Melting point : 1540 °C
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Relative evaporation rate (butylacetate=1) : No data available
- Flammability (solid, gas) : No data available
- Explosive limits : No data available
- Explosive properties : No data available
- Oxidising properties : No data available

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|                                  |                     |
|----------------------------------|---------------------|
| Vapour pressure                  | : 1 mm Hg @ 1787 C  |
| Relative density                 | : 7.85              |
| Relative vapour density at 20 °C | : No data available |
| Solubility                       | : Water: Insoluble  |
| Log Pow                          | : No data available |
| Log Kow                          | : No data available |
| Auto-ignition temperature        | : No data available |
| Decomposition temperature        | : No data available |
| Viscosity                        | : No data available |
| Viscosity, kinematic             | : No data available |
| Viscosity, dynamic               | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| Nickel (7440-02-0) |              |
|--------------------|--------------|
| LD50 oral rat      | > 9000 mg/kg |

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Skin corrosion/irritation         | : Not classified                       |
| Serious eye damage/irritation     | : Not classified                       |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity            | : Not classified                       |
| Carcinogenicity                   | : May cause cancer.                    |

| Nickel (7440-02-0)                           |                                                   |
|----------------------------------------------|---------------------------------------------------|
| IARC group                                   | 2B - Possibly carcinogenic to humans              |
| National Toxicology Program (NTP) Status     | 3 - Reasonably anticipated to be Human Carcinogen |
| In OSHA Hazard Communication Carcinogen list | Yes                                               |

| Carbon black (1333-86-4)                     |                                      |
|----------------------------------------------|--------------------------------------|
| IARC group                                   | 2B - Possibly carcinogenic to humans |
| In OSHA Hazard Communication Carcinogen list | Yes                                  |

|                                                  |                  |
|--------------------------------------------------|------------------|
| Reproductive toxicity                            | : Not classified |
| Specific target organ toxicity (single exposure) | : Not classified |

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|                                                     |                                                                                                                                                              |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific target organ toxicity (repeated exposure)  | : Causes damage to organs through prolonged or repeated exposure.                                                                                            |
| Aspiration hazard                                   | : Not classified                                                                                                                                             |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met.                                                                                          |
| Symptoms/injuries after inhalation                  | : May cause an allergic skin reaction.                                                                                                                       |
| Other information                                   | : Exposure to dust or fumes from some metal including iron, zinc, manganese, chromium, cobalt, and copper can produce a condition known as metal fume fever. |

### SECTION 12: Ecological information

#### 12.1. Toxicity

| Nickel (7440-02-0) |                                                                         |
|--------------------|-------------------------------------------------------------------------|
| LC50 fish 1        | > 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)           |
| EC50 Daphnia 1     | > 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)               |
| LC50 fish 2        | 1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static]) |
| EC50 Daphnia 2     | 1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])          |

#### 12.2. Persistence and degradability

| Carbon and Alloy Steels       |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

#### 12.3. Bioaccumulative potential

| Carbon and Alloy Steels   |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

|                              |                                                      |
|------------------------------|------------------------------------------------------|
| Effect on the global warming | : No known ecological damage caused by this product. |
| Other information            | : Avoid release to the environment.                  |

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|                                |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials      | : Avoid release to the environment.                                       |

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

#### Additional information

|                   |                                           |
|-------------------|-------------------------------------------|
| Other information | : No supplementary information available. |
|-------------------|-------------------------------------------|

#### ADR

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

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### SECTION 15: Regulatory information

#### 15.1: US Federal regulations

##### Nickel (7440-02-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

|                                       |       |
|---------------------------------------|-------|
| SARA Section 313 - Emission Reporting | 0.1 % |
|---------------------------------------|-------|

##### Carbon black (1333-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2: International regulations

##### CANADA

##### Nickel (7440-02-0)

Listed on the Canadian DSL (Domestic Substances List)

|                      |                                                                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### Carbon black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List)

|                      |                                                                                    |
|----------------------|------------------------------------------------------------------------------------|
| WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |
|----------------------|------------------------------------------------------------------------------------|

##### EU-Regulations

##### Nickel (7440-02-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

##### Carbon black (1333-86-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on ELINCS (European List of Notified Chemical Substances)

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

Not classified

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

No additional information available

##### National regulations

##### Nickel (7440-02-0)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on the Canadian IDL (Ingredient Disclosure List)

##### Carbon black (1333-86-4)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on the Canadian IDL (Ingredient Disclosure List)

#### 15.3: US State regulations

##### Nickel (7440-02-0)

| U.S. - California -<br>Proposition 65 -<br>Carcinogens List | U.S. - California -<br>Proposition 65 -<br>Developmental Toxicity | U.S. - California -<br>Proposition 65 -<br>Reproductive Toxicity -<br>Female | U.S. - California -<br>Proposition 65 -<br>Reproductive Toxicity -<br>Male | No significance risk<br>level (NSRL) |
|-------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------|
| Yes                                                         | No                                                                | No                                                                           | No                                                                         |                                      |

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| Carbon black (1333-86-4)                              |                                                             |                                                                     |                                                                   |                                   |
|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
| Yes                                                   | No                                                          | No                                                                  | No                                                                |                                   |

| Nickel (7440-02-0)                                                                                                                                                                                                                                                                                             |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances<br>U.S. - Pennsylvania - RTK (Right to Know) List |  |  |  |  |

| Carbon black (1333-86-4)                                                                                                                                                                                                              |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances<br>U.S. - Pennsylvania - RTK (Right to Know) List |  |  |  |  |

### SECTION 16: Other information

Other information : None.

Full text of H-statements:

|              |                                                                |
|--------------|----------------------------------------------------------------|
| Carc. 1B     | Carcinogenicity, Category 1B                                   |
| Carc. 2      | Carcinogenicity, Category 2                                    |
| Skin Sens. 1 | Sensitisation — Skin, category 1                               |
| STOT RE 1    | Specific target organ toxicity — Repeated exposure, Category 1 |
| H317         | May cause an allergic skin reaction                            |
| H350         | May cause cancer                                               |
| H351         | Suspected of causing cancer                                    |
| H372         | Causes damage to organs through prolonged or repeated exposure |

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*