

# SAFETY DATA SHEET

## Section 1: Identification

**Product Name:** Hot rolled plate (Low Carbon Alloy Steel)  
**Chemical Name/Synonyms:** Metals  
**Company:** Makstil AD-Skopje, 16 Makedonska brigada No.18, 1000 Skopje Republic of North Macedonia,

## Section 2: Hazard(s) Identification

**Hazard Classification:** H320\*, H317\*, H333\*  
**Signal Word(s):** Warning  
**Hazard Statements:** Causes eye irritation, may cause an allergic skin reaction, may be harmful if inhaled  
**Pictograms:**



**Precautionary Statements:** N/A  
**Description of other hazards:** N/A  
 \*When cutting, grinding, welding

## Section 3: Composition/ Information on Ingredients

| Chemical Name | Synonym | CAS#       | Conc. %     |
|---------------|---------|------------|-------------|
| Carbon        | C       | 7440-44-0  | 0.08-0.70   |
| Chromium      | Cr      | 7440-47-3  | 0.00-0.50   |
| Copper        | Cu      | 7440-50-3  | 0.00-0.60   |
| Lead          | Pb      | 7439-92-1  | 0.00-0.10   |
| Manganese     | Mn      | 7439-96-5  | 0.30-1.60   |
| Molybdenum    | Mo      | 7439-98-7  | 0.00-0.30   |
| Nickel        | Ni      | 7440-02-0  | 0.00-0.50   |
| Phosphorous   | P       | 7723-14-0  | 0.035 max   |
| Silicon       | Si      | 7440-21-3  | 0.10-0.50   |
| Sulphur       | S       | 7704-34-9  | 0.035 max   |
| Vanadium      | V       | 7440-62-2  | 0.00-0.12   |
| Aluminum      | Al      | 7429-90-5  | 0.02-0.06   |
| Boron         | B       | 7740-42-8  | 0.00-0.0005 |
| Iron          | Fe      | 7439-89-5  | 99 max      |
| Titanium      | Ti      | 7440-32-6  | 0.00-0.03   |
| Niobium       | Nb      | 7440-03-1  | 0.00-0.05   |
| Nitrogen      | N       | 10102-44-0 | 0.00-0.012  |
| Antimony      | Sb      | 1309-64-4  | 0.00-0.05   |

**Note:** The above listing is a summary of the elements used in alloying steel. Various grades of steel will contain different combinations of these elements. For example, Lead is not alloyed in Duferco steel products and is usually below detection limit. Trace elements may also be present in minute amounts.

#### Section 4: First-Aid Measures

**After skin contact:** If irritation develops, remove clothing and wash well with soap and water. If condition persists, get medical attention.

**After eye contact:** Immediately flush well with running water. Get medical attention.

**After inhalation:** Remove to fresh air. Get medical attention.

**After swallowing:** Get medical attention.

#### Section 5: Fire-Fighting Measures

**Suitable extinguishing agents:** N/A

**Special protective equipment for firefighters:** N/A

Steel products in the solid state do not present a fire or explosion hazard.

#### Section 6: Accidental Release Measures

**Personal precautions:** N/A

**Measures for environmental protection:** N/A

**Measures for cleaning/collecting:** N/A

Not applicable to steel in the solid state.

#### Section 7: Handling and Storage

**Handling:** Safety and working equipment should be maintained in good condition.

**Storage:** Good storage practices should be maintained at all times.

#### Section 8: Exposure Controls/Personal Protection

**General protective and hygienic measures:** General practices

**Breathing equipment:** Wear protective mask

**Protection of hands:** Wear protective gloves

**Eye protection:** Wear protective glasses

#### Section 9: Physical and Chemical Properties

**Form:** Solid

**Odor:** No

**Odor threshold:** N/A

**pH:** N/A

**Melting point/melting range:** above 1500°C (above 2732°F)

**Boiling point/boiling range:** N/A

**Flash point:** N/A

**Evaporation rate:** N/A

**Flammability:** N/A

**Upper/lower flammability or explosive limits:** N/A

**Auto ignition temperature:** N/A

**Danger of explosion:** N/A

**Vapor pressure:** N/A

**Vapor density:** N/A

**Relative density:** 7.85 t/m<sup>3</sup>

**Solubility in/Miscibility with water:** N/A

#### Section 10: Stability and Reactivity

**Reactivity:** Stable solid material

**Chemical stability:** Stable except at extreme heat (above 1500°C).

**Conditions to avoid:** Do not store strong acids close to the hot rolled plates.

**Incompatible materials:** React with strong acids to form hydrogen gas.

**Hazardous decomposition products:** Smoke fumes and oxide of iron, manganese, chromium, nickel and molybdenum when welding or flame cutting. Area to be kept well ventilated.

### Section 11: Toxicological Information

|                              |  |
|------------------------------|--|
| Aluminum                     | May initiate fibrotic changes to lung tissue.  |
| Chromium                     | Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract, and possible cancer of nasal passages and lungs.                               |
| Copper                       | Pulmonary effects.   |
| Iron (Iron-oxide)            | Pulmonary effects, siderosis.  |
| Lead                         | Prolonged exposures can cause behavioural changes, kidney damage, periphery neuropathy characterized by decreased hand-grip strength and adverse reproductive effects. |
| Manganese                    | Bronchitis, pneumonitis, lack of coordination.   |
| Molybdenum                   | Pain in Joints, hands, knees and feet.<br>Morphological changes in the liver, kidneys and spleen; anemia, diarrhea, coma, deformity and growth retardation.            |
| Nickel                       | Same as Chromium.  |
| Phosphorous                  | Necrosis of the mandible.  |
| Sulphur (as Sulphur dioxide) | Edema of the lungs.  |
| Vanadium                     | Emphysema, pneumonia.  |
| Zinc                         | Arthritis, lameness and inflammation of the gastro-intestinal tract reported from animal studies.  |

| Section 12: Ecological Information (non-mandatory)  |
|---|
| <b>Eco toxicity:</b> N/A<br><b>Mobility:</b> N/A<br><b>Biodegradation:</b> N/A<br><b>Bioaccumulation:</b> N/A |
| Section 13: Disposal Considerations (non-mandatory)   |
| Waste from hot rolled steel plates is non-hazardous waste and can be recycled.                                |
| Section 14: Transport Information (non-mandatory)   |
| CN code: 7208...  |
| Section 15: Regulatory Information (non-mandatory)  |
| N/A   |
| Section 16: Other Information   |
| <b>SDS date of preparation/update:</b> 10.03.2020   |