

## SAFETY DATA SHEET

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## SECTION 1-CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name : HOT COIL AND HOT ROLLED STEEL SHEETS  
JIS G 3131 Hot-rolled mild steel plates, sheet and strip,  
JIS G 3101 Rolled steels for general structure,  
JIS G 3106 Rolled steels for welded structure,  
JIS G 3136 Rolled steels for building structure,  
JIS G 3132 Hot-rolled carbon steel strip for pipes and tubes,  
JIS G 3125 Superior atmospheric corrosion resisting rolled steels,  
JIS G 3113 Hot-rolled steel plate, sheet and strip for automobile  
structural uses,  
Checkered Steel Stripes and Checkered Steel Sheets (TCP).

SDS Number : TS02-003en

Manufacturer/Supplier : TOKYO STEEL MANUFACTURING CO., LTD.

Address : Kasumigaseki-Tokyu Bldg 15F, 3-7-1, Kasumigaseki, Chiyoda-ku,  
Tokyo 100-0013, Japan

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## SECTION 2-HAZARDS IDENTIFICATION

GHS Classification : Not applicable

GHS Label Elements : Not applicable

Other hazards which do not result in classification:

This product is physical and chemically stable solid under normal environment.

No information available as PHYSICAL HAZARDS of Pyrophoricity or Flammable etc., HEALTH HAZARDS of Reproductive toxicity etc. and ENVIRONMENTAL HAZARDS of Aquatic toxicity (Acute) etc.

However, those below are may be necessary handling with sufficient care.

- Take caution to prevent turnover or rolling for heavy weight materials.
- May cause skin damage by contact to cut-off end face of steel materials and cutting chips.
- May cause irritation of respiratory system, eyes and other mucous membrane or harmful effects of a pneumoconiosis by the raises fume and dust by processing of welding, fusing and polishing.
- May cause flammability or dust explosion for fine powder.

## SECTION 3-COMPOSITION/INFORMATION ON INGREDIENTS

Classification of the substance or mixture: Mixture (Alloys)

## Components and content:

Components	Concentration (%)	CAS No.	ICSC No.	ISHL No.	GHS No.
Iron [Fe]	Remnant	7439-89-6	-	-	-
Manganese [Mn]	$\leq 1.65$	7439-96-5	174	550	200
Copper [Cu]	$\leq 0.65$	7440-50-8	240	379	850
Nickel [Ni]	$\leq 0.65$	7440-02-0	62	418	169
Chromium [Cr]	$\leq 1.25$	7440-47-3	29	142	108

CAS: Chemical Abstracts Service.

ICSC: International Chemical Safety Cards.

ISHL: Order for Enforcement of Industrial Safety and Health Act. Article 18-2, Appended Table 9.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

Concentration ranges of component is different from the above by the standards and type of the product.

Containing the trace elements of silicon, phosphorus and sulfurs apart from the principal component of above table.

## SECTION 4-FIRST AID MEASURES

Get medical advice/attention if necessary, when after first-aides. Those below as an example.

Inhalation	: If difficulty breathing by inhalation fumes, give oxygen and immediately get medical advice/attention.
Skin contact	: Wash skin immediately with plenty of water and soap, Remove/Take off contaminated clothing by fume or dusts. Get medical advice/attention if necessary.
Eyes contact	: If fume or dusts is in the eyes, flush with water and immediately get medical advice/attention.
Ingestion	: If fume or dusts is swallowed, rinse mouth and large amount of water and immediately get medical advice/attention.
Others	: If skin damage by cutting chips, keep clean of the wound and get medical advice/attention if necessary. If burned by electric arc, keep cool the affected area and get medical advice/attention if necessary.
Significant signs or symptoms expected emergency overview	: Inhalation; cough Eyes; redness Causes damage to organs (respiratory system) through prolonged or repeated exposure.
Protection for first-aides	: No information available.
Special notes for doctors	: No information available.

## SECTION 5-FIRE FIGHTING MEASURES

This product is non-combustible (solid) at normal handling and storage. None risk of flammability or explosion under normal environment. However, may cause flammability or dust explosion under the dry condition or deposited with oils and fats as dust of cutting chips or fine powder.

When the fire, Wear protective equipment, extinguish the fire from the windward side of the fire with extinguishing media and shuts off combustion source.

Suitable extinguishing media : Not restriction on use of normal water spray and extinguishing media. Use appropriate extinguishing media for surrounding fire.  
When the not extinguishing agent, may be used a dry sand.



	In case of flammability or dust explosion, it also increase risk of steam explosion. However, it is no problem cause to cool surrounding with water spray where area without the fire.
Unsuitable extinguishing media	: No information available.
Special hazards arising from the chemical	: No information available.
Special firefighting procedures	: No information available.
Special protective equipment and precautions for fire-fighters	: When extinguish the fire, Use suitable protective equipment such as Protective cloth, Self-contained breathing apparatus (SCBA), Closed circuit oxygen SCBA and rubber boots.

#### SECTION 6-ACCIDENTAL RELEASE MEASURES

Not leakage with a solid under normal environment.

Personal precautions, protective equipment and emergency procedures	: Use suitable protective equipment, Prevent inhalation of dusts and contact with eyes.
Environmental precautions	: Immediately collect generated dust by machining or grinding
Methods and materials for containment and cleaning up	: Use high efficiency cleaner (e.g. filter vacuum cleaner for dust collecting) is recommended for which can collect the raises fume and dust by processing of welding, fusing and polishing.

#### SECTION 7-HANDLING AND STORAGE

##### Handling

Technical measures	: In case of raises fume and dust by processing of welding, fusing and polishing, use suitable protective equipment. And also, In case of raises fume and dust, use total or local exhaust ventilation required to handle.
Precautions for safe handling	: Take caution to prevent turnover or rolling for heavy weight materials. Avoid contact, inhalation or ingestion. Do not contact with eyes. Wear protective gloves handling, because of cut-off end face is sharpness.
Prevention of Contact	: Refer section 10-STABILITY AND REACTIVITY.
Specific Hygiene Measures	: Wash hand thoroughly after handling.

##### Storage

Storage conditions	: Avoid contact with leak water, acid, alkaline or those including substance. Avoid rapid temperature change and hot and humid environment. Cover or Packaging as necessary, such as use a waterproof sheet for prevents the spread of rainwater and Spreading oil or rustproof papers for acid cleaning of corrosion control. Use equipment for taking light, lighting and ventilation required to handle, Where storing and handling in storage area.
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#### SECTION 8-EXPOSURE CONTROL/PERSONAL PROTECTION

Until now, No information available of "EXPOSURE CONTROL/PERSONAL PROTECTION" under normal used environment.

However, wear suitable protective equipment of a safety mask, safety goggles, safety gloves, protective clothing during handling of welding, fusing and polishing. And also, Keep working environment air contaminant below the Occupational exposure limits by using local exhaust ventilation.

Personal protection equipment's

- |                          |   |
|--------------------------|---|
| Respiratory protection   | : Use suitable respiratory protective equipment.  |
| Hand protection          | : Wear suitable protective gloves.  |
| Eye protection           | : Wear suitable protective goggles.<br>Wear safety glass.<br>My cause eyes and face contact by splash or spray, Wear universal chemical splash goggles and face shield protector. |
| Skin and body protection | : Use protective equipment of protective clothing and safety work shoes.  |

#### SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

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|----------------------------------|----------------------------|
| Physical state, Form, Color etc. | : Solid of white silver.   |
| Odor                             | : Metal odor.              |
| Melting point/freezing point     | : 1500-1535°C              |
| Specific gravity (Density)       | : ca. 7.8g/cm <sup>3</sup> |
| Solubility                       | : Insoluble in water.      |

#### SECTION 10-STABILITY AND REACTIVITY

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|-----------------------------------|---|
| Chemical stability                | : Stable under normal environment.  |
| Possibility of hazardous reaction | : Deficiency of oxygen or toxic gas may be contact chemical Substances of water and acids.              |
| Condition to avoid                | : Contact with high humidity and incompatible materials.  |
| Incompatible materials            | : Oxidizing substances.   |
| Hazardous decomposition products  | : May cause generated metal compound and fume, when processing of heat, soluble, melting and polishing. |

#### SECTION 11-TOXICOLOGICAL INFORMATION

This product is stable at normal conditions.

However, may cause irritation of respiratory system or harmful effects of a pneumoconiosis by the raises fume and dust by processing.

And also, If long-term contact with some of the materials: May cause an allergic skin reaction.

#### SECTION 12-ECOLOGICAL INFORMATION

Until now, No information available as effect on the environment.

#### SECTION 13-DISPOSAL CONSIDERATIONS

Recycle used scrap by dispose appropriately with local/regional/national/international regulations, and also caring an environment.

#### SECTION 14-TRANSPORT INFORMATION

Not regulated under international regulation on transport.

Prevent breaking during transportation, Because of heavy weight materials.

To prevent the infiltration of rainwater, recommended use a cover with sheets etc.

SECTION 15-REGULATORY INFORMATION
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Industrial Safety and Health Law

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR act)

SECTION 16-OTHER INFORMATION
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Disclaimer

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This safety data sheet was prepared in reference with JIS Z 7253:2012 [Hazard communication of chemicals based on GHS -- Labelling and Safety Data Sheet (SDS)].

The information was obtained from current and reputable sources and intended to provide "reference information" for safe use of product. However, no warranty for comprehensiveness or accuracy is made with respect to such data or assessment.

The contents herein are not guaranteed although we carefully review them.

As this information do not comprising for the all human, environment, satisfy and health hazards.

Therefore, It is assumed any chemical product has unknown hazard are not documented, extreme caution is required for handling.

It is the user's responsibility to determine safe conditions for use of this product and should be in accordance with related legislations. For special handling, please use it in the light of suitable safety measures for application and usage.