

Safety Data Sheet(SDS)

1. PRODUCT AND COMPANY IDENTIFICATION

- Product name Cold rolled steel strips, Cold rolled special steel strips, Hot rolled steel strips
- Company name Takasago Tekko K.K.
- Address 1-1-1, Shingashi, Itabashi-ku, Tokyo
- Telephone +81-3-5399-8178
- Fax +81-3-3550-6320
- Emergency Telephone See above.

2. HAZARDS IDENTIFICATION

- GHS classification:
<Health Hazards>

Hazard item	Hazard category	Hazard information
Skin corrosion and skin irritation	Class 3	Causes mild skin irritation (H316)
Serious eye damages/eye irritation	Class 2B	Causes eye irritation (H320)
Respiratory sensitization	Class 1	May cause allergy or asthma symptoms or breathing difficulties if inhaled (H334)
Skin sensitization	Class 1	May cause an allergic skin reaction (H317)
Germ cell mutagenicity	Class 1	Suspected of causing genetic defects (H341)
Carcinogenicity	Class 2	Suspected of causing cancer (H351)
Reproductive toxicity	Class 1 (1A and 1B)	May damage fertility or the unborn child (H360)
	Class 2	Suspected of damaging fertility or the unborn child (H361)
Specific target organ toxicity (single exposure)	Class 1	Causes damage to respiratory organs or kidney (H370)
	Class 2	(Systemic toxicity) May cause damage to organs (H371)
	Class 3	(Respiratory irritation) May cause respiratory irritation (H335)
Specific target organ toxicity (repeated exposure)	Class 1	Causes damage to respiratory organs or nervous system through prolonged or repeated exposure (H372)

- <Potential environmental effects>

Hazard item	Hazard category	Hazard information
Aquatic toxicity (chronic)	Class 4	May cause long-lasting harmful effects to aquatic life (H413)

- GHS label elements:
<Pictograms>



- <Signal words>
Danger, Caution

- <Warning notes>

(Precautionary statements)

- Do not handle until all safety precautions have been read and understood (P202)
- Avoid breathing dust/mist (P261)
- Wash hands thoroughly after handling (P264)
- Do not eat, drink or smoke when using this product (P270)
- Use only outdoors or in a well-ventilated area (P271)
- Contaminated work clothing should not be allowed out of the workplace (P272)
- Avoid release to the environment (P273)
- Wear protective gloves. (P280)
- [In case of inadequate ventilation] wear respiratory protection. (P284)

(Emergency response)

- IF ON SKIN: Wash with soap and plenty of water. (P302 + P352)
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304 + P340)
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. (P305 + P351 + P338)
- IF exposed or concerned: Get medical advice/treatment (P308+P313)
- Call a physician if you feel unwell. (P312)
- If skin irritation or a rash occurs: Get medical advice/attention. (P333 + P313)
- If eye irritation persists: Get medical advice/attention. (P337 + P313)
- If experiencing respiratory symptoms: Call a physician. (P342 + P311)
- Take off contaminated clothing and wash it before reuse. (P362 + P364)

(Disposal)

- Dispose of contents/containers in accordance with international / national / prefectural /or city regulations. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

- Chemical substance or mixture classification: Mixture (iron-based alloy steel)
- Main component:

Component	Content (wt%)	CAS No.	ICSC No.	PRTR Law*1 Cabinet order No.	ISH Law* Cabinet order No.
Silicon 【Si】	0 to 2.0	7440-21-3	1508		-
Manganese 【Mn】	0 to 2.0	7439-96-5	0174	Class1, 412	550
Nickel 【Ni】	0 to 1.0	7440-02-0	0062	Class1, 308	418
Chrome 【Cr】	0 to 2.0	7440-47-3	0029	Class1, 87	142

Molybdenum 【Mo】	0 to 1.0	7439-98-7	1003	Class1, 453	603
Copper 【Cu】	0 to 1.0	7440-50-8	0240	-	379
Iron 【Fe】	Residual quantity	7439-89-6	-	-	-

*1. Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

*2 Industrial Safety and Health Act

Note 1: Component contents will vary depending on the type of the standard within the range indicated in the table above.

Note 2: In addition to the components listed above, includes trace elements such as carbon (C), phosphorus (P), sulfur (S) and nitrogen (N).

Note 3: Classification; - ; not applicable

4. FIRST AID MEASURES

If dust or fumes emitted during the processing, etc., of steel materials are inhaled or ingested, or skin contact, carry out the following first aid measures. If necessary, obtain medical advice or attention from a physician.

- Inhaled : Remove person to fresh air and keep comfortable for breathing.
- Skin contact : Wash with soap and plenty of water immediately.
- Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if it can be easily removed, and continue to wash.
- Ingestion : Rinse mouth thoroughly and immediately with water.
- Other : Maintain the cleanliness of the wound if injuring the skin with a steel cutting edge or cutting chips etc. Cool the affected area if receiving a burn injury from arc welding etc.

5. FIREFIGHTING MEASURES

The steel itself is in a non-flammable (solid) state. In the event of fire, fire extinguishers and water may be used. However, steel in fine powder form may be combustible or

Extinguishing media : Use fire extinguishing media appropriate for the circumstances.
Extinguishing media to avoid : No information

6. ACCIDENTAL RELEASE MEASURES

The steel itself is in a solid state, so no leakage will occur under normal circumstances. In the event of the accidental release of dust or fumes during processing, etc., of steel materials, the following measures are to be carried out.

- Personal precautions : Wear suitable protective equipment and avoid inhaling dust or fumes or contact with eyes.
- Protective equipment and emergency procedures : Refer to protective equipment described in 8. "EXPOSURE CONTROLS/PERSONAL PROTECTION."
- Environmental precautions : Dust and similar residue generated by processing such as cutting and polishing must be promptly collected.

- Procedures and equipment : After using an appropriate method to recover dust for containment and generated by steel processing,prevent accidental spillage. cleanup

7. HANDLING AND STORAGE

- Handling :

<Technical measures>

In cases in which steel is to be welded, fused, polished, etc., wear appropriate protective equipment if dust, fumes, etc., may be generated. Additionally, if dust, fumes, etc., may be generated, use the necessary local exhaust and general

< Precautions for safe handling>

Take care to prevent the overturn, collapse, or fall of heavy objects.

The cut ends, cuttings of steel, etc., may have burrs that could wound skin.

Arcs used in welding, fusing, etc., may cause burns.

When hoops and bands used in packaging are cut, the ends may spring up. Exercise special care when handling coiled products as the ends are prone to spring up.

- Storage :

<Conditions for safe storage>

Avoid contact with water, acid, alkali, or any substances containing these.

Avoid environments of high temperature and high humidity. If necessary, use sheets, covers, and packaging to prevent rust or wetting by rainwater.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Since steel normally occurs in a solid state, there is no useful information regarding exposure controls and personal protection under ordinary circumstances.

However, when steel is welded, fused, polished, cut, etc., dust and fumes are generated, so the following equipment measures and protective measures must be taken:

- Acceptable concentrations:

		Japan Society for Occupational Health	AGCIH ^{*1}
Component	CAS No.	Acceptable concentration [mg/m ³]	TLVs·TWA [mg/m ³]
Silicon 【Si】	7440-21-3	-	-
Manganese 【Mn】	7439-96-5	0.2	0.2
Nickel 【Ni】	7440-02-0	1	1.5
Chrome 【Cr】	7440-47-3	0.5	0.5
Molybdenum 【Mo】	7439-98-7	-	10(I)/3(R) ^{*2}
Copper 【Cu】	7440-50-8	-	1 ^{*3} /0.2 ^{*4}
Iron 【Fe】	7439-89-6	-	-

Note 1: Search results from NITE HP/Chemical Risk Information Platform (CHRIP)

Note 2: The symbol “-” in the table means that the item is not in that category or could not be classified.

*1 American Conference of Governmental Industrial Hygienists

*2 (I): Inhalable fraction; (R): Respirable fraction

*3 Dust and mists, as Cu

*4 Fume

equipment measures: Where dust, fumes, etc., are generated, appropriate ventilation measures must be provided and a proper work environment secured.

Protective equipment: Wear appropriate protective equipment, including respiratory protective equipment, protective gloves, protective goggles, protective clothing, and safety shoes, in areas where dust, fumes, etc., are generated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state, shape, color, etc. : Silver white solid
 Odor : Metallic odor
 Melting point : 1,370°C or higher
 Specific gravity (relative density) : 7 to 9 g/cm³
 Solubility : Insoluble in water

10. STABILITY AND REACTIVITY

Stability: : Stable under normal conditions.
 Possible hazardous reactions : Contact with chemicals such as water and acid may cause oxygen shortage and generate harmful gases.

Conditions to avoid : Avoid environments of high temperature and high humidity or contact with incompatible hazardous substances.

Incompatible hazardous substances : Oxidizing substances, etc.
 Hazardous decomposition products : Fumes generated during processing such as welding and fusing may contain metal compounds.

11. TOXICOLOGICAL INFORMATION

Hazard item	[Si]	[Mn]	[Ni]	[Cr]	[Mo]	[Cu]	[Fe]
Acute toxicity	-	-	-	-	-	-	-
Skin corrosion and irritation	-	Class 3	-	-	-	-	-
Serious eye damages or eye irritation	Class 2B	Class 2B	-	Class 2B	-	-	-
Respiratory sensitization or skin sensitization	-	-	Class 1	Class 1	-	-	-

Germ cell mutagenicity	-	-	-	Class 2	-	-	-
Carcinogenicity	-	-	Class 2	-	-	-	-
Reproductive toxicity	-	Class 2B	-	-	-	-	-
Specific target organ toxicity (single exposure)	-	Class 1	Class 1	Class 2,3	Class 3	Class 3	-
Specific target organ toxicity (repeated exposure)	-	Class 1	Class 1	-	-	Class 1	-
Aspiration hazard	-	-	-	-	-	-	-

Note 1:NITE Website/Chemical substances information/GHS related information search results.

Note 2:The "-"symbol in the table means that it cannot be classified or categorized.

Note 3:For details about classification information,refer to clause 2 "Hazard Identification".

12. ECOLOGICAL INFORMATION

Hazard item	[Si]	[Mn]	[Ni]	[Cr]	[Mo]	[Cu]	[Fe]
Aquatic environmental hazards(acute)	-	-	-	-	-	-	-
Aquatic environmental hazards(chronic)	-	Class 4	Class 4	-	-	Class 4	-

Note 1:NITE Website/Chemical substances information/GHS related information search results.

Note 2:The "-"symbol in the table means that it cannot be classified or categorized.

Note 3:For details about classification information,refer to clause 2 "Hazard Identification".

13. DISPOSAL CONSIDERATIONS

- Residual waste:

Dispose of in an environmentally friendly manner that complies with the laws concerning industrial waste and any related prefectural or local bylaws.

- Contaminated containers and packaging:

Any pollutants adhering to containers or packaging must be disposed of as residual waste, in an environmentally friendly manner that complies with the laws concerning industrial waste and any related prefectural or local bylaws.

14. TRANSPORTATION CONSIDERATIONS

Not applicable to the substance under international transportation controls.

15. REGULATORY INFORMATION

- Industrial Safety and Health Act
- Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

16. OTHER INFORMATION

- Reference information, etc.
 - JIS Z7253: Hazard communication of chemicals based on GHS- Labelling and Safety Data Sheet (SDS)
 - GHS Correspondence - Labelling and SDS Provision System for PRTR Act and ISH Act(October 2012,Ministry of Economy,Trade and Industry and Ministry of Health,Labour and Welfare)
 - National Institute of Technology and Evaluation (NITE) website
 - Workplace Safety site (Ministry of Health, Labour and Welfare)

This data sheet contains reference information compiled to ensure safe product handling and to provide operators with information available to the company at the time the document was created. It does not represent a guarantee of product safety.

We ask operators to keep in mind that they should refer to this document and exercise their own discretion in implementing appropriate measures based on the actual circumstances that apply to their specific circumstances.