First Edition: April 1, 2006
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Material Safety Data Sheet

Chemical Product and Company Identification

Product Name : JIS G 3112 Steel Bar for Concrete Reinforcement
JIS G 3505 Low Carbon Steel Wire Rod
Ministry of Land, Infrastructure, Transport and Tourism Certified Product
Products conforming to overseas standards, etc.
Steel Billet

Company Name : Takunan Steel Co., Ltd.
Address : 3-26 Kaiho-cho, Okinawa-shi, Okinawa
Department-in-charge: Quality Control Department
Telephone No. : 098-934-6822
FAX No. : 098-934-6833
Emergency Contact No.: Same as above

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2. Hazard Identification

GHS Classification Category

Not applicable.

Other Hazards

As steel, the product is physically and chemically stable in solid state under normal environmental conditions.

At present, there is no useful hazard information related to physico-chemical hazards, human health hazards, and environmental hazards.

Precautionary Statement

[Safety Measures] Wear appropriate protective equipment to prevent dust and the like from being inhaled or getting into your eyes.

[First-aid Measures] If inhaled or in eyes, get medical advice if necessary.

[Storage] Avoid high temperature and humidity, and if necessary, cover the product with a sheet to prevent penetration of rain water and rusting.

[Disposal] Dispose in the appropriate manner, such as recycling as scrap iron, in accordance with laws and regulations.

In addition, it may also be necessary to take note of the following points.

・Since the product is a heavy load, pay attention to falling, rolling, load collapsing, etc.

・Cut end and chips of the steel material may hurt skin.

・Fume and dust generated from processing such as welding , fusing, and polishing may irritate the respiratory organs, the eyes and other mucus membranes, or may cause disorders such as pneumoconiosis.

・Fine powder of the product may combust or explode.

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3. Composition and Information on Ingredients

Chemical Substance or Mixture Classification: Mixture (The solid alloy steel consisting mainly of iron is stable)

Ingredients and Content

Ingredient	Concentration (%)	CAS No.	ICSC No.	Industrial Safety and Health Act No.	GHS No.
Iron [Fe]	Remaining amount	7439-89-6	—	—	—
Manganese [Mn]	2.00 or less	7439-96-5	174	550	200
Copper [Cu]	1.00 or less	7440-50-8	240	379	850
Nickel [Ni]	0.50 or less	7440-02-0	62	418	169
Chromium [Cr]	1.00 or less	7440-47-3	29	142	108

CAS: Chemical Abstracts Service (Chemical substance registration system that is operated and managed by the American Chemical Society)

ICSC: International Chemical Safety Cards

Industrial Safety and Health Act: Appendix 9, Article 18-2, Enforcement Order of the Industrial Safety and Health Act

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

(Globally Harmonized System related to the classification and labelling of chemical products)

The concentration of the ingredients varies in the above range depending on the product specification and type.

Other than the above ingredients, the product contains trace elements such as carbon (C), silicon (Si), phosphorus (P), and sulfur (S).

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4. First-aid Measures

Since the normal state of the steel material is solid, situations requiring first-aid measures do not occur under normal environmental conditions.

However, fumes and dust are generated when the product undergoes processing, etc. so, if the following situation occurs, perform the first-aid measures shown below and then get medical advice

as needed.

The following are examples of first-aid measures.

・If inhaled:

If breathing difficulties occur due to fumes and dust, remove victim to fresh air and keep at rest in a position comfortable for breathing.

・If on skin:

If fume and dust are on skin, wash immediately with soap and copious amount of water.

・If in eyes:

If fume and dust get into the eyes, wash with water. If wearing contact lenses, remove them if they are easily removed. Then continue washing eyes.

・If swallowed:

If fume and dust are swallowed, drink copious amount of water, and rinse mouth.

・Other:

If skin is cut by chips and the like, wash the wound and keep it clean.

If the victim suffers burns due to arcs associated with welding and fusing, cool the affected area.

・The most important signs and symptoms in expected acute symptoms and delayed symptoms

Inhalation: cough, Eyes: redness

・Protection for persons giving first-aid measures: No information available.

・Special precautions for doctors: No information available.

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5. Fire-fighting Measures

Since the normal state of the steel material is solid and it is incombustible, it does not combust or explode under normal environmental conditions.

However, if dust or fine powder of chips and the like resulting from processing dries up or accumulates deposits of fats and oils, it may combust or explode.

In the event of fire, wear protective equipment and extinguish the fire from the windward side using a fire-extinguishing agent.

・Fire-extinguishing media : There are no usage restrictions, so use a fire-extinguishing agent that is suitable for the surrounding fire.

In case of dust or fine powder of chips and the like, do not spray water directly, as it may cause a steam explosion.

However, there is no problem with spraying water on the area which is not yet burning.

・Fire-extinguishing agent that should not be used: No information.

・Specific hazards: No information.

・Specific fire-extinguishing method: No information.

・Protection of fire-fighters: Wear appropriate protective equipment such as protective clothing and air respirators when fire-fighting.

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6. Accidental Release Measures

The normal state of the steel material is solid, so accidental release does not occur under normal environmental conditions.

・Personal precautions, protective equipment and emergency measures:

Wear appropriate protective equipment to prevent dust and the like from being inhaled or getting into the eyes.

・Environmental precautions:

Immediately collect the dust generated by processing, etc.

・Containment and Cleaning Methods and Equipment:

It is preferable for dust generated by processing and the like to be collected using a vacuum cleaner, etc.

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7. Handling and Storage

・Handling

Technological measures: If dust and the like is generated by processing, etc., wear appropriate protective equipment to avoid contact with eyes and skin, and prevent inhalation or swallowing.

In addition, provide necessary local and general ventilation.

Safe handling precautions: Since the product is a heavy load, pay attention to falling, rolling, load collapsing, etc.

Cut end, chips, and the like are sharp, so wear protective gloves.

Arcs associated with welding and fusing, etc. may cause burns, so wear appropriate protective equipment.

Wash hands after handling.

・Storage

Technological measures: Provide the necessary daylight, lighting, and ventilation for storage and handling at the storage place.

Dew condensation and the like may cause rust.

Safe storage conditions: Avoid contact of the product with moisture, acids and alkalis and substances containing them.

Avoid rapid temperature changes and hot and humid environments.

If necessary, cover with a sheet to prevent penetration of rain water and rusting, etc.

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8. Exposure Control and Personal Protection

Since the normal state of the steel material is solid, no information corresponding to exposure control and personal protection under normal environmental conditions is available.

However, when undergoing processing such as welding, fusing, polishing, and cutting for this product, wear appropriate protective equipment such as goggles, gloves, masks, and clothes.

Ensure a proper work environment by providing appropriate local and general ventilation.

・Respiratory protective equipment: Wear appropriate respiratory protective equipment.

・Hand protective equipment: Wear appropriate protective gloves.

・Eye and/or face protection: Wear appropriate eye protective equipment.

If there is a possibility of flying particles or diffusing vapor coming into contact with the eyes or face, wear chemical splash goggles or a face shield.

・Skin and body protective equipment: Wear appropriate protective equipment such as protective clothes and safety shoes.

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9. Physical and Chemical Properties

・Physical state, appearance, color, etc. : Solid under normal environmental conditions. Oxide film is black.

・Odor : None.

・pH : No data.

・Melting point and freezing point: 1500 - 1535℃

・Boiling point, initial boiling point and boiling range: No data

・Flash point : Does not combust.

・Upper and lower limits of combustion or explosion range: Does not combust.

・Spontaneous ignition temperature: Does not combust.

・Combustibility : Incombustible. However, fine powder and the like generated during processing may combust or explode.

・Specific gravity (density) : about 7.8g / ㎤

・Solubility : Insoluble in water

・Viscosity : No data.

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10. Stability and Reactivity

・Stability : The solid alloy steel is stable under normal environmental conditions.

・Possibility of hazardous reactions: Coming into contact with chemical substances such as acids may produce a hazardous gas.

・Conditions to be avoided : Hot and humid atmosphere. Contact with incompatible substances.

・Incompatible substance : Strong acids.

・Hazardous decomposition products: Fumes and the like are generated during processing such as welding, fusing, polishing, and cutting.

11. Toxicological Information

The product is physically and chemically stable in solid state under normal environmental conditions.

At present, there are no useful toxicological information available.

However, dust generated by processing and the like may cause mechanical irritation or damage to the respiratory organs.

12. Ecological Information

At present, there are no useful ecological information available.

13. Disposal Consideration

Dispose of the product in an appropriate and environmentally-friendly manner, including recycling as iron scraps, in accordance with laws and regulations related to industrial waste disposal, and relevant ordinances established by prefectural and municipal governments.

14. Transport Information

There are no precautions for the product as a hazardous substance. In addition, the product is not subject to international regulation for transportation.

The product is a heavy load, so pay attention to collapsing.

In order to prevent penetration of rain water, etc., it is preferable to cover the product with a sheet and the like.

15. Regulatory Information

Industrial Safety and Health Act

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

16. Other Information

References

・PRTR Law, Labelling in the Industrial Safety and Health Act, and SDS Provision System in compliance with GHS (January 2020)

・JIS Z 7253：2019 [Method of Transmission of Hazard Information of Chemical Products Based on GHS - Labels and Displays in the Workplace and Safety Data Sheets (SDS)]

・National Institute of Technology and Evaluation（NITE）Website

This Material Safety Data Sheet was created based on information obtained from the above reference materials.

This document is intended to provide reference information to ensure safe handling of the product and provide information our company has at the time of preparation of this document to companies handling the product. This document does not constitute a guarantee of any kind as regards the accuracy of the information and the safety of the product.

The information written in this document is not intended to cover all human, environmental, safety and health effects of the product. In addition, all chemical substances have unknown hazards.

Therefore, there may be possible risks not described in this Material Safety Data Sheet, which is beyond the knowledge of our company, so it is necessary for the person who handles the product to be aware of their own personal responsibility to take appropriate actions and precautions using the information contained herein as reference.

The person handling the product should understand that there may be a need to take safety measures depending on the intended purpose and usage of the product.