



شركة الإتحاد الحديد والصلب ذ.م.م
UNION IRON & STEEL CO.LLC
MADE IN UAE

HSSEQ MANAGEMENT SYSTEMS

MATERIAL SAFETY DATA SHEET(MSDS)

REBAR

Manufacturer: Union Iron & Steel Company LLC

Address: P.O Box Number 8529- ICAD1,

Mussafah – Abu Dhabi – UAE

Email: Info-uis@uis-uae.com

Contact: +97128856333

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SECTION1: MATERIAL IDENTIFICATION

PRODUCT: DEFORMED CARBON STEEL REBAR

(TRADE NAME AND SYNONYMS: STEEL PRODUCT SUCH AS CONCRETE REINFORCING BAR (rebar) (8-32mm) compliance with international specifications and approvals from certification bodies such as UK CAREES)

CERTIFICATES AND DOCUMENTS:

Following supporting shall be accompanied with:

- Radioactive free material certificates of conformance
- ISO 9001:2015 QMS certification
- UK CARES Product conformity certificates
- BS ISO 45001:2018 certification
- ISO 14001:2015 EMS Certification
- DCL Certificate of product conformity – BS 4449:2005
- DCL Certificate of product conformity – BS 4449:1997
- DCL Certificate of product conformity – ISO 6935-2:2007
- DCL Certificate of product conformity – ASTM A615/A615M-13 CHAMBER OF COMMERCE

SECTION2: INGREDIENTS (chemical composition (% by mass))

REBAR Specifications

Element	Min value by % wt.	Max value by % wt.
Carbon(C)	0.14	0.37
Sulphur (S)	0.040	0.040
Phosphorus(P)	0.040	0.040
Nitrogen(N)	0.012	0.012
Manganese (Mn)	0.65 min	0.65 min
Chromium (Cr)	0.30	0.40
Molybdenum (Mo)	0.04	0.040
Vanadium(V)	0.04	0.04
Nickle (Ni)	0.40	0.40
Tin (Sn)	0.30	0.04
Copper (Cu)	0.15	0.30
Silicon (Si)	0.60	0.30
Cu + 8 Sn max	0.60	0.60
Carbon Equivalent	0.30	0.48

SECTION III: FIRE AND EXPLOSION DATA

Flash point and method:	Auto ignition Temperature:	Flammability Limits in Air:	Lower	Upper
N/A	N/A	N/A	N/A	N/A

Extinguisher media: Non-Combustible -no fire or explosion hazard

Special firefighting Procedures: N/A



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Unusual fire and explosion hazards: N/A

SECTION IV: HEALTH HAZARD INFORMATION

Effects of over exposure: No toxic effects would be expected from inert solid form. Prolonged repeated exposure to fumes or dust generated by heating, cutting, burning, grinding or welding can result in minor skin or eye irritations.

First Aid:

Eye contact: Flush well with running water to remove particles; obtain medical attention

Skin Contact: Brush off excess dust; wash area with soap and water

Inhalation: Remove to fresh air; obtain medical attention

Ingestion: seek medical attention if large quantities of material have been ingested.

SECTION V: REACTIVITY DATA

STABILITY	Stable	X	CONDITION TO AVOID: N/A
	Unstable		

Incompatibility (Materials to avoid): Concentrated Inorganic acids

Hazardous decomposition products: Hydrogen gas

Hazardous polymerization	May occur		Conditions to avoid: Exposure to concentrated inorganic acids and or hydrogen gas
	May not occur	X	

SECTION VI: SPECIAL PROTECTION INFORMATION

Respiratory Protection: During welding cutting, burning or grinding operations precautions to be taken to control airborne particles and/or fumes; use general service or nuisance dust respirators of type approved by international standard.

Ventilation:	Local exhaust: To control dust, fumes, etc. when grinding, cutting/burning	Special: N/A
	Mechanical (General): N/A	Other: N/A

Protective gloves: To protect against skin abrasion	Eye Protection: Safety glasses with side shields of type approved by international standard.
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Other protective equipment and precautions: N/A

First Aid Measures:

Eye Contact: In case over exposure to dust or fumes, immediately flush eyes with plenty of water for at least 15minutes occasionally lifting the eyelids. Get medical attentions if irritation persists. Thermal bourns should be treated as medical emergency

Skin Contact: In case of over exposure to dust or particulates, wash with soap and plenty of water. get medical attention if irritation develops or persists. if thermal bourns occur flush area with cold water and get immediate medical attention.

Inhalation: In case of over exposure to dusts or fumes, remove to fresh air. get immediate medical attention if symptoms described in this SDS develop.

Ingestion: not considered as ingestion hazard, However, if excessive amounts of dust or particulates are swallowed, treat symptomatically and supportively. get medical attention.

Notes to Physician: Inhalation of metal fumes or metal oxides may produce an acute febrile state, with cough, chills, weakness and general malaise, nausea, vomiting, muscle cramps and remarkable leukocytosis. Treatment is symptomatic and condition is self-limited in 24-48 hours. chronic exposure to dusts may result in pneumoconiosis of mixed type.

FIREFIGHTING MEASURES:

Flash point (Method): - Not applicable.

Flammable Limits (% volume in air)- Not applicable



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Auto Ignition temperature: Not applicable

Extinguishing media: for molten metal use dry power or sand, for steel dust use dry sand water, foam, argon or nitrogen.
Special firefighting procedures: do not use water on molten metal.do not use carbon dioxide(Co2).Fire fighters should not enter confined space without wearing NIOSH/MSHA or other international standard approved positive pressure breathing apparatus(SCBA)with full face mask and full protective equipment.

Unusual fire or explosion hazard: steel products do not present fire or explosion hazards under normal conditions. any non -oxidized fine metal particles/dust generated by grinding, sawing, abrasive blasting or individual customer process may produce material that the customer should test for combustibility and other hazards in accordance with applicable regulations. High concentrations of combustible metallic fines in the air may present an explosion hazard.

ACCIDENTAL RELEASE MEASURES:

Precautions if material is spilled or released: Emergency response is unlikely unless in the form of combustible dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions out lined in this MSDS, Fine turnings and small chips should be wept of vacuumed and placed into appropriate disposal containers. keep fine dust or powder away from sources of ignition. Scrap should be reclaimed for recycling. Prevent materials from entering drains, sewers, or waterways. Specific standard and regulations may be applicable to materials generated by individual customer processes.as appropriate, these standards and regulations should be consulted for applicability.

Fire and Explosion Hazards: Some customer processes may generate combustible dust that may require specific precautions when cleaning spills or release of dust.

Environmental precautions: Some grades of steel may contain reportable quantities of alloying elements.

Waste disposal method: Disposal of used or unused product in accordance with applicable Federal, state and local regulations. please recycle.

HANDLING AND STORAGE:

Storage temperatures: Stable under normal temperatures and pressures.

Precautions to be taken in handling and storage: store away from strong oxidizers. Dusts and/or powders alone or combined with process specific fluids may form explosive mixture with air. Applicable Federal, state and local regulations may requires testing dust generated from processing of steel carbon and alloy steels product to determine if it represents a fire or explosions hazard and to determine appropriate protection methods. Avoid breathing dusts or fumes.

STABILITY AND REACTIVITY:

Stability: Stable

Conditions to avoid: Steel at temperatures above the melting may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fumes.

Hazardous Polymerization: will not occur.

Incompatibility (Materials to avoid): reacts with strong acids to form hydrogen gases. Do not store neat strong oxidizers.

Hazardous Decomposition Products: Metallic fumes may be produced during welding, burning, grinding and possible machining or any situations with the potential for thermal decomposition.

ECOLOGICAL INFORMATION:

Aquatic Eco toxicological Data: No specific information available on this product.

Environmental fate Data: No specific information available on this product.

DISPOSABLE CONSIDERATIONS:



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Recovery and reuse rather than disposal, should be the goal of handling efforts. Disposal in accordance with federal state and local health and environmental regulations. Prevent materials from entering drains, sewers, or waterways.

SECTION VII. SPECIAL PRECAUTIONS AND COMMENTS

Storage & Handling Information: General good housekeeping practices are enough.

Other precautions: None

Union Iron and steel Co. LLC believe that all information given herein is accurate and is offered in good faith. However, although responsible care has been taken in the preparation of this information, conditions of use and suitability of this information for buyers are the buyers responsibility and we make no warranties or responsibilities, as to the accuracy or sufficiency of such information for application to the buyers use of for consequences thereof.

Where the information provided herein discloses a potential hazardous ingredient, adequate warning should be provided to employees and appropriate precautions taken including, without limitation, the practice of good industrial hygiene.