

MATERIAL SAFETY DATA SHEET

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SAT-STEEL CARBON STEEL ABRASIVES, GRAINS AND POWDERS

1. Company Details:

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Product Identification:

Shiny metallic grey, spherical and angular aggregate particles between 0.005mm and 2mm diameter.

Trade Name: Sat-Steel
 Chemical family: Ferrous
 Chemical name: Carbon steel

2. Material Composition:

Chemical name	CAS reg No.	% Weight	ACGIH mg/m ³	TLV	OSHA PEL mg/m ³
Carbon (C)	7740-44-0	<1.2	3.5 (Carbon Black)		3.5 (Carbon Black)
Iron (Fe)	7439-89-6	Balance	5 (as oxide fume)		10 (total particulate)
Manganese (Mn) Elemental and Inorganic compounds as Mn fume, as Mn and as Mn oxide	7439-96-5	<2.0	0.2 (fume)		5 (ceiling)
Silicon (Si) As silicon dioxide (SiO ₂)	7440-21-3	<1.0	10 (dust) 0.05 (respirable fraction)		5 (respirable) 10/(%SiO ₂ + 2); SiO ₂ measured as respirable fraction

3. Hazards Identification:

Main Hazard: Non Hazardous

 Flammability: Non Flammable
 Chemical Hazard: Inert – will oxidize slowly in presence of moisture and oxygen
 Biological Hazard: Not known
 Other hazards: None which result in classification

4. First Aid Measures

Description of first aid measures

General information

In case of persisting adverse effects, consult a physician.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air. No special action required.

After skin contact

Wash off immediately with soap and water. No special action required. May cause skin abrasion; seek medical advice if needed.

After eye contact

Flush with plenty of clean water. Contact may cause tearing and redness, seek medical advice if irritation persists.

After ingestion

Rinse mouth thoroughly with water. No special action required.

5. **Fire Fighting Measures**

Flash Point: Not Applicable

Auto ignition temperature: (solid iron exposed to oxygen) 1,200°C

Flammability limits: Not applicable

Cast steel shot and grit will not burn or explode. A mild fire or explosion hazard situation may be created due to the fine dust that may result from use. Fire extinguishing method – use class D extinguishing agents or dry sand to exclude air. Do not use liquids or foam.

6. **Accidental release measures**

Steel shot or grit leaked onto floors can create hazardous walking conditions. No special precautions are necessary when cleaning up spills other than OSHA approved respirators if there is a large amount of dust. Spilled shot can be reclaimed for re-use or disposed of in non hazardous disposal facilities. However, spent shot and grit normally contains other contaminants from the surface of parts cleaned and may therefore be classified as hazardous waste. As such, used material should be disposed of according to local regulations.

7. **Handling and Storage**

Suitable packaging: Paper, steel drums, poly or bulk bags

Handling and storage: Do not expose to moisture or excessive UV (if poly or bulk bags) and do not exceed floor loading limits

8. **Exposure controls and personal protection**

Occupational exposure limits : NIOSH limits, personal exposure should be kept below 10mg/m³ per 8 hour time weight average total inhalable dust and 5 mg/m³ per 8 hour time weighted average respirable dust. A suitable NIOSH/MSHA approved full face piece filter/respirator should be worn

Engineering control measures : Exhaust ventilation should be sufficient to maintain dust levels below applicable exposure limit

Personal protection – respiratory: When engineering control limits are not sufficient to lower dust levels below the applicable exposure limit, use a NIOSH-approved respirator. NIOSH – approved respirators should be used during all abrasive blasting operations. Ancillary workers should use NIOSH approved dust respirators.

Personal protection – hand : Impervious gloves while blasting and handling of product

Personal protection – eye : Safety goggles or safety glasses with side shields or full face shield should be worn as a minimum protection from impact. Dust goggles should be worn when excessively dusty conditions are expected

Personal protection – skin : The use of hard toe shoes, gloves and impervious clothing should be worn to avoid skin contact

9. **Physical and Chemical properties**

Physical state:	Granular – angular and spherical
Colour:	Grey to bluish grey
Odour:	Odourless
pH:	Not available
Boiling Point:	Not applicable
Melting Point:	Dissociates at 2700°C
Vapor Pressure:	Not applicable
Density:	>7 g/cm ³
Bulk density:	+/- 4 kg/m ³
Solubility in water:	not applicable

10. **Stability and Reactivity**

Stability:	Stable
Conditions to avoid:	incompatible chemicals and moisture
Incompatible chemicals:	Strong acids/alkalis
Hazardous decomposition products:	None expected

11. **Toxicological Information**

Acute toxicity:	Non toxic
Skin and eye contact:	Non toxic
Chronic toxicity:	Nil
Carcinogenicity:	Nil
Mutagenicity:	Nil
Reproductive hazards:	Nil

12. **Ecological Information**

Aquatic toxicity – fish	Nil
Aquatic toxicity – algae	Nil
Biodegradability:	Nil
Bio-accumulation:	Nil
Mobility:	Nil

13. **Disposal Consideration:**

This material is considered as non hazardous. However, once used as a shot blast medium it may contain hazardous materials from the surface of parts cleaned and should be disposed of according to local regulations.

Disposal of packaging: It is recommended that packaging is disposed of at a suitable recycling facility

14. **Transport Information:**

Land Transport

ADR: Not regulated
GGVS: Not regulated
RID: Not regulated
GGVE: Not regulated

Sea Transport

IMDG/GGVSEA-code: Not regulated

Air Transport

ICAO/IATA-DGR: Subject to IATA restrictions
Other information: May be sent by mail

15. Regulatory Information:

UN no: Not Applicable
Substance identity no: Not Applicable
IMDG – class: Not Applicable
IMDG – packaging group: Solid non-corrosive
EEC Hazard classification: Not Applicable
Risk phrases: Do not ingest
Safety phrases: Not Applicable

16. Other Information:

None

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