

The Surface Finishing Equipment Group Ltd



Surface Finishing
Equipment Group

TECHNICAL & MATERIAL

SAFETY DATA SHEET

CHILLED IRON

Chilled Iron Grit is a high performance, fast cleaning and re-usable hematite cast iron abrasive. It is an induction furnace melted chilled iron abrasive and its low residual elements, together with a tightly controlled chemical analysis ensures an extended service life

GRADES / PARTICLE SIZES

Product Size (mm)	% : min & max cumulative percentages allowed on corresponding sieves															
	0%		80% min	90% min												
G80 2.0 - 2.8	0%		80% min	90% min												
G66 1.7 - 2.4		0%		80% min	90% min											
G55 1.4 - 2.0			0%		80% min	90% min										
G47 1.2 - 1.7				0%		75% min	85% min									
G39 1.0 - 1.4					0%		75% min	85% min								
G34 0.85 - 1.2						0%		75 min	85% min							
G24 0.6 - 1.0							0%			70% min	85% min					
G17 0.42 - 0.85								0%				70% min	80% min			
G12 0.3 - 0.71									0%					65% min		85% min
G07 0.18 - 0.42												0%			65% min	75% min
G05 0.12 - 0.3														0%		60% min
G02 <0.13																All Pass
BS Sieve No.	6	7	8	10	12	14	16	18	22	25	30	36	44	52	85	120
SAE Sieve No.	7	8	10	12	14	16	18	20	25	30	35	40	45	50	80	120
Aperture	2.80	2.36	2.00	1.70	1.40	1.18	1.00	0.85	0.71	0.60	0.50	0.425	0.355	0.30	0.18	0.125

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COMPOSITION INFORMATION

Typical chemical analysis, of a random sample. Major element being Iron (Fe).

<u>COMPOUND</u>	<u>CHEMICAL FORMULA</u>	<u>TYPICAL CONTENT</u>
Carbon	C	2.50 - 3.00%
Silicon	Si	1.40 - 1.80%
Sulphur	S	0.15 - 0.20%
Phosphorus	Ph	0.50 - 1.00%
Manganese	Mn	0.30 - 0.50%

CHEMICAL & PHYSICAL PROPERTIES

Boiling Point	3000 °C
Melting Point	1350 °C
Bulk Density	4 Tonne/ Cubic Metre / 250lb/Cubic Foot
Vapour Pressure at room temperature	Negligible
Vapour Pressure at working temperature	Negligible
Vapour Density	Greater than air
Solubility or dispersiveness in water	Negligible: will corrode in the presence of some salts
Adhesion Qualities	Magnetic at N.T.P.
Non-Inflammable	As supplied*
Non -Explosive	As supplied*
* Spontaneous combustion may occur if stored in bulk containers in an unstable temperature and humidity environment	
Shape:	Angular
Typical average hardness	>57HRC or >650 HV
Mean Hardness deviation	± 3HRC or ±40 HV
Microstructure	Highly refined chilled iron
Minimum density measured by alcohol displacement	>7.0g/cm ³
Handling	
Transport	Ensure secure packaging
Storage	Keep dry in a stable environment
Usage	Avoid Spillage
Disposal	The company is unaware of any restrictions concerning the disposal of abrasive waste in the form of grit



HEALTH AND SAFETY DATA SHEET

CHILLED IRON

Product and Reference: Chilled Iron Abrasive

Date of Issue: 07/10/2016

1. IDENTIFICATION OF THE PREPARATION AND COMPANY

Company: The Surface Finishing Equipment Group Ltd

Product Code: G07, G12, G17, G24, G34

Intended Use: Abrasive blasting media

Name and full address: The Surface Finishing Equipment Group Ltd

Comprising :

Hogg Blasting & Finishing Equipment Ltd
Unit 10 Armstrong Road, Armstrong Industrial Estate, Washington,
Tyne & Wear, United Kingdom, NE37 1PR.
Tel. (0191) 415 3030 Fax (0191) 415 5345

AND

Abraclean Ltd
Ann Street, Stockport, Cheshire. SK5 7PP
Tel: (0161) 480 8087 Fax: (0161) 480 4424

2. COMPOSITION / INFORMATION ON COMPONENTS

Typical chemical analysis, of a random sample. Major element being Iron (Fe).

COMPOUND	CHEMICAL FORMULA	TYPICAL CONTENT
Carbon	C	2.50 - 3.00%
Silicon	Si	1.40 - 1.80%
Sulphur	S	0.15 - 0.20%
Phosphorus	Ph	0.50 - 1.00%
Manganese	Mn	0.30 - 0.50%

3. HAZARD IDENTIFICATION

Main Hazards	Dust from handling operations
Health Effects - Eyes	Dust may cause slight transient irritation.
Health Effects – Skin	Repeated or prolonged contact may produce irritation.
Health Effects - Ingestion	None known
Health Effects - Inhalation	Exposure to dust may have the following effects:- irritation of nose, throat and respiratory tract,

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4. FIRST AID MEASURES

General:

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air, keep the patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.

Skin Contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner.

Ingestion:

Mouth rinse and give water to drink.

Eye:

Eye wash with plenty of water.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water

6. ACCIDENTAL RELEASE MEASURES

Recovery measures:

Product can be swept up dry or wet. Personnel should use appropriate personal protective equipment particularly if material is in powder form and dry.

7. HANDLING AND STORAGE

Handling: Avoid breathing dust and spillage whilst handling.

The Manual Handling Operations Regulations may apply to the handling of bags when carrying out assessments.

Storage:

The storage and use of this product is not subject to any requirements but it should be kept dry where this is important for further process use.

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8. EXPOSURE CONTROLS /PERSONAL PROTECTION

General:

- Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should only be employed in processes in which this product is used under supervision.
- Persons with a history of skin sensitisation problems should only be employed in processes in which this product is used under appropriate medical supervision.

Engineering Measures:

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction during process use.

Occupational Exposure Standards:

1. Total dust Less than 10 mg per cubic metre 8h TWA
2. Respirable dust Less than 4 mg per cubic metre 8h TWA

Personal Protection:

All Personal Protective Equipment, include Respiratory Protective Equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

Respiratory Protection:

None except where used in applications that would cause dust, and then appropriate respiratory protection should be used depending on the application.

Hand Protection:

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types. Barrier creams may help to protect exposed areas of the skin but are not substitutes for full physical protection.

Eye Protection:

Eye protection designed to protect against exposure which should be an EC approved helmet in blasting operations.

Skin Protection:

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Physical state: Metallic particles
Colour: Grey
Odour: None

Safety relevant data:

Melting point: 1300 - 1500 degrees C
Lower explosion limit: Not applicable
(ferrous particles < 0.5mm can engage in exothermic oxidation)
Upper explosion limit: Not applicable
Specific gravity: 7.0 kg/dm₃
Bulk density: 4500 kg/dm₃
Hardness: Varying, from minimum 41 Rockwell C
Solubility in water: None; but will corrode

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	No relevant studies identified
Irritancy - Eyes	Splashes in the eye may cause irritation and irreversible local damage
Irritancy - Skin	Repeated or prolonged contact with the product may lead to skin irritation
Sub-acute/Subchronic Toxicity	No relevant studies identified.
Chronic Toxicity/Carcinogenicity	Appropriate protective measures and good hygiene practices should be followed in order to minimise potential exposure.
Genotoxicity	No relevant studies identified.
Reproductive/Developmental	
Toxicity	No relevant studies identified
Human Data	Inhalation over long periods of time may constitute a health hazard
Additional Data	None

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12. ECOLOGICAL INFORMATION

There is no data available on the product itself. The Air Pollution Control requirements of regulations made under the Environmental Protection Act may apply to the use of this product.

13. DISPOSAL CONSIDERATIONS

The material in its supplied form is non hazardous inert solid waste and is classified as such under Appendix A section 10 06 01 of the Consolidated European Waste Catalogue EC Landfill Directive (16th July 2004),

The disposal of material after it has been used may cause the product to fall into a different category.

14. TRANSPORT INFORMATION

UN Number	Not regulated
ADR/RID substance ID number	Not regulated
IMDG	Not regulated
Tremcard No. TEC ®	Not regulated

15. REGULATORY INFORMATION

The information contained in this safety data sheet does not constitute the suppliers own assessment of workplace risks as required by other Health and Safety legislation. The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

16. OTHER INFORMATION

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications, and we do not accept any liability for any loss or damage , however arising, which may result directly or indirectly from the use of this information.

Further information and relevant advice can be found in:

- Control of Substances Hazardous to Health (COSHH) Regulations 2002 (2005)
- European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation)
- The Manual Handling Operations Regulations 1992 (SI 1992:2793)
- The Environmental Protection (Duty of Care) Regulations 1992 (SI 1992-2839).