MATERIAL SAFETY DATA SHEET

Material: Steel Grit (SAE J444)

INGRITECH
SUPPLIES AND RAW MATERIALS FOR INDUSTRY

Section I. Identification of the Substance and of the Company

Product Name: Steel Grit (SAE J444)

Product Identifier: GH/GL/GP/GS (16,18,25,40,50,80)

GH — Hot Granulated shot.
GL — Light shot (lower content of certain elements).
GP — General-purpose shot.
GS — Standard shot for industrial applications

Product use: Shot blasting – rust, scale, and coating removal. Shot peening – improves metal durability. Casting cleanup – defect and sand removal. Surface roughening – enhances coating adhesion.

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Section II. Hazards Identification

2.1 Classification of the substance or mixture

Classification: Not classified. Steel shot does not meet the criteria for classification under EC1272/2008, so no special conditions are required. However, risk management measures may be necessary to address potential hazardous dusts during abrasive use.

2.2 Label elements

Labeling complies with Regulation (EC) No 1272/2008, superseding Directive 67/548/EC (DSD): None.

2.2 Other hazards

The substance does not qualify as a PBT or vPvB.

- **Dust:** The use of this material may generate dust, necessitating risk management measures. Blasting operatives must wear a CE-marked or HSE-approved helmet, while ancillary workers should use a P2 dust respirator and safety goggles. All operatives are required to wear appropriate gauntlets and heavy-duty coveralls or a specially designed blasters' suit.
- **Feuerexplosion:** Folgende Partikel können eine Brandgefahr darstellen:
  - Metalstaub
  - Kunststoffstaub
  - Staub, der beim Sprengen von mit Lack, Gummi usw. beschichteten Metallen entsteht.
- **Other Risks:**
  - Abrasive projection can cause skin injuries if proper protection is not used.
  - Noise exposure.
  - Slips and falls may occur due to abrasive materials on the floor.

Section III. Composition / Ingredients Information

Steel shot is cast steel with the following composition:

Fe, %	C, %	Mn, %	Si, %	S, %	P, %
96,5-98,0	0,8-1,2	0,6-1,2	0,5-1,0	≤ 0.05	≤ 0.05

Chemical characterisation	EINECS	CAS No.	(1) REACH Registration No. (2) CLP Notification No.	Classification according to CLP Regulation (EC) No. 1272/2008	
				Hazard classes / hazard	Hazard statements
Iron (Fe)	231-096-4	7439-89-6	(1) 01-2119462838-24-0112 (2) 02-2119709515-40-0000	-/-	-/-
Carbon (C)	231-153-3	7440-44-0	(2) 02-2119702044-56-0000	-/-	-/-
Silicon (Si)	231-130-8	7440-21-3	(2) 02-2119702607-42-0000	-/-	-/-
Manganese (Mn)	231-105-1	7439-96-5	(2) 02-2119704138-45-0000	-/-	-/-

All chemical elements in chilled Steel Shot are in an alloyed form, not in a free form.

Section IV. FIRST AID MEASURES

4.1. Description of first aid measures

- **Inhalation:** Move to fresh air and seek medical attention if symptoms develop.
- **Skin:** The substance is neither a skin irritant nor a sensitizer. Wash with soap and water, remove contaminated clothing and footwear, and seek medical advice if symptoms arise.

- **Eye:** The substance is not an eye irritant. If irritation occurs, avoid rubbing your eyes and rinse thoroughly with water. Remove contact lenses if present. Seek medical attention if irritation persists.
- **Ingestion:** No known danger; rinse mouth if needed. Do not induce vomiting. Offer water to drink.
- **Advice to physician**: No specific advice; treat based on the symptoms present.

4.2. Key symptoms and effects, both immediate and delayed

- The product may cause temporary mechanical irritation to the eyes, nose, throat, and lungs.

4.3. Indication of any immediate medical attention and special treatment needed

- Doctor's notes: Treat symptoms accordingly.

Section V. FIREFIGHTING MEASURES

5.1. Extinguishing media

- The product is noncombustible. Use an extinguishing agent suitable for the surrounding materials.
- For Class A fires (packaging): use ABC powder, water, or foam.
- For Class D fires (metal fires): use powders or CO_2.
- Avoid dispersing fine particles near ignition sources.

5.2. Special hazards arising from the substance or mixture

- Hazardous combustion products: None.

5.3. Advice for firefighters

- Use self-contained breathing apparatus and protective clothing.

Section VI. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Ensure adequate ventilation.
- Avoid breathing dust.
- Use appropriate personal protective equipment.
- Vacuum or brush spilled material from floor to reduce the risk of falls / slips

6.2. Environmental precautions:

- Ensure that spills can be contained.
- Do not allow entry into surface water or drains.
- Do not allow entry into soil or subsoil.

6.3 Methods and Material for Containment and Cleaning Up:

- Ventilation: Ensure the area is well-ventilated to disperse any fumes or dust.
- Cleanup: Use a vacuum or broom to collect the spilled material and place it in an appropriate container. The material can then be recycled

6.4 Reference to Other Sections:

- Section 1: Emergency contact information.
- Section 8: Information on personal protective equipment (PPE).
- Section 13: Waste disposal guidelines.

Section VII. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

- Chilled steel shot / grit is not classified and does not require special protective measures for safe handling.
- Prevent the formation of dust.
- Use only in well-ventilated areas.
- Wear appropriate personal protective clothing.
- Wash hands and face before breaks and after work.

7.2 Conditions for Safe Storage, Including Any Incompatibilities:

- Keep the product dry. No other special storage requirements.

7.3 Specific End Use(s)

- Abrasive blast cleaning may fracture the product, generating dust.
- Ensure proper ventilation in the work area, especially around the operator.

Section VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters:

- The user must understand the exact nature of the dust produced during the industrial process where the abrasive is used and take the necessary precautions to protect workers.
- A qualitative analysis is required for blasted materials that may contain substances with defined exposure limits.
- Ensure compliance with the exposure limits for substances present in abrasives, especially considering the relevant average exposure limits as per the environmental regulations of the receiving country.

8.2 Exposure Controls

Appropriate Engineering Controls:

- Use process enclosures, local exhaust ventilation, or other engineering controls to maintain exposure levels below any recommende
- For storage and handling, general ventilation is typically sufficient.

Personal Protective Equipment (PPE):

- Blasting operatives should wear a CE-marked or HSE-approved blasting helmet.
- Ancillary workers should wear a P2 dust respirator and safety goggles.
- Operatives must always wear appropriate gauntlets.
- Heavy-duty coveralls or purpose-designed blasters' suits should be worn.
- Wear heavy-duty boots with toe protection.

Section IX. PHYSICAL AND CHEMICAL PROPERTIES

- **Shape** - Solid, angular particles
- **Hardness GH** - min 700 HV ; 60 HRC
- **Hardness GL** - 510-700 HV ; 51-61 HRC
- **Hardness GP** - 460-630 HV ; 47-56 HRC
- **Hardness GS** - 390-530 HV ; 40-51 HRC
- **Density** - 7.0 g/cm3
- **Colour** - Grey
- **Odour** - None
- **Odour Threshold** - Not applicable
- **pH** - Not applicable
- **Melting Point** - approx. 1 535 °C / not usefully applicable
- **Flash Point** - Not applicable
- **Upper/Lower Flammability or Explosive Limits** - Not
- **Solubility** - Insoluble in water
- **Explosive Properties** - Non-explosive
- **Size characteristics** -

Standard Sieve Opening Size, mm	G16	G18	G25	G40	G50	G80
4.75						
4.00						
3.35						
2.80						
2.36						
2.00						
1.70	0					
1.40		0				
1.18	>75		0			
1.00	>85	>75		0		
0.85						
0.71		>85	>70		0	
0.60						
0.50						
0.43			>80	>70		0
0.36						
0.30				>80	>65	
0.18					>75	>65
0.13						>75

Explanation:

- The number in the table represents the maximum or minimum allowable percentage for the respective abrasive that passes through the indicated sieve.
- Symbols like ">90" or ">85" indicate that more than 90% or 85% of the abrasive should be smaller than the sieve opening.

Section X. STABILITY AND REACTIVITY

10.1 Reactivity:

- Not applicable. See Section 9.

10.2 Chemical Stability:

- Stable under normal conditions.

10.3 Possibility of Hazardous Reactions:

- Iron oxide dust, when mixed with certain metal dusts, can produce an aluminothermic reaction.

10.4 Conditions to Avoid:

- Avoid dust formation and contact with moisture, as this may lead to aggregation.

10.5 Incompatible Materials:

- Water.

10.6 Hazardous Decomposition Products:

- The material does not decompose.

Section XI. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

- Known Severe Toxicity: None
- Known Local Effects: None

Section XII. ECOLOGICAL INFORMATION

Leaching tests have been conducted on abrasive samples. The analytical results indicate that there are no specific pollutants or toxins present.

Section XIII. DISPOSAL CONSIDERATIONS

Disposal Regulations:

- Dispose of abrasive material in accordance with national and local regulations (refer to Section 16).

Classification of Material:

- The material, as supplied, is classified as non-hazardous and inert.
- Used abrasive (spent abrasive) must be disposed of under one of the following classifications:
  - 12 01 16: Waste blasting material containing dangerous substances.
  - 12 01 17: Waste blasting material not containing dangerous substances.

Waste Evaluation:

The producer of the waste must assess whether any hazardous substances in the coating being removed could render the waste hazardous.

Section XIV. TRANSPORT INFORMATION

- **International Regulations (ADR, IMDG, ICAO):** Not applicable.
- **Transport Outside Storage Areas:** Protect from moisture.
- **Packaging:** 25 kg polyethylene bags, packed in cardboard on a 1000 kg pallet or big bags on a 1000 kg pallet.
- **Country of origin:** Ukraine

Section XV. REGULATORY INFORMATION

15.1 Safety, Health, and Environmental Regulations/Legislation Specific to the Substance or Mixture

- The product, known as steel shot / grit, is subject to applicable national and European laws.

European Regulations:

- According to European Regulation No. 1999/45/CE and No. 67/548/CEE, ferrous abrasives are not classified as dangerous preparations.
- According to European Regulation No. 1907/2006/CE (REACH), ferrous abrasives are classified as articles.
- The substances contained in ferrous abrasive (in the form of alloys) are not intended to be released intentionally under normal or reasonably foreseeable conditions of use.
- In accordance with Articles 3.3, 7.1, 7.2, 7.3, 33, 57, 59, and all related documents of the current regulation, and in order to prevent any potential exposure of humans and the environment to these substances under normal or foreseeable conditions of use, including waste disposal, this safety data sheet has been created with appropriate instructions.

Section XVI. OTHER INFORMATION

The information in this document is based on our current knowledge. Any person or organization wishing to provide feedback or comments should contact us. Please note that the information provided is not exhaustive, and the user must be fully informed of all aspects.

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