

**Material Safety Data Sheet**

Impact Test Equipment Ltd  
[www.impact-test.co.uk](http://www.impact-test.co.uk) & [www.impact-test.com](http://www.impact-test.com)

**Impact Test Equipment Ltd.  
Building 21 Stevenston Ind. Est.  
Stevenston  
Ayrshire  
KA20 3LR**

T: 01294 602626

F: 01294 461168

E: [sales@impact-test.co.uk](mailto:sales@impact-test.co.uk)

Test Equipment Web Site  
[www.impact-test.co.uk](http://www.impact-test.co.uk)

Test Sieves & Accessories Web Site  
[www.impact-test.com](http://www.impact-test.com)

## SAFETY DATA SHEET

C290-06



Date Issued : 03/13/2018  
 SDS No : HM-186  
 Date Revised : 03/13/2018  
 Revision No : 1

## HM-186 Gilson Gray Iron

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** HM-186 Gilson Gray Iron

**MANUFACTURER**

Gilson  
 P.O. Box 200  
 Lewis Center, OH 43035  
**Emergency Phone:** (800)424-9300  
**Alternate Emergency Phone:** (800)444-1508  
**Customer Service:** (740)548-7298  
**E-Mail:** customerservice@gilsonco.com

**24 HR. EMERGENCY TELEPHONE NUMBERS**

Poison Control Center (Medical): 1-800-222-1222  
 CHEMTREC (US Transportation): 1-800-424-9300  
 CHEMTREC (Canada Transportation): 1-703-527-3887

## 2. HAZARDS IDENTIFICATION

**GHS CLASSIFICATIONS****Health:**

Eye Irritation, Category 2B  
 Skin Irritation, Category 2  
 Carcinogenicity, Category 2

**GHS LABEL**

Exclamation  
mark



Health  
hazard

**SIGNAL WORD:** WARNING

**HAZARD STATEMENTS**

H320: Causes eye irritation.  
 H315: Causes skin irritation.  
 H335: May cause respiratory irritation.  
 H351: Suspected of causing cancer.

**PRECAUTIONARY STATEMENTS****Prevention:**

P201: Obtain special instructions before use.  
 P202: Do not handle until all safety precautions have been read and understood.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P264: Wash ... thoroughly after handling.

**Response:**

P308+P313: IF exposed or concerned: Get medical advice/ attention.  
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313: If eye irritation persists: Get medical advice/attention.  
 P302+P352: IF ON SKIN: Wash with plenty of water/...

P322: Specific measures (see ... on this label).  
 P332+P313: If skin irritation occurs: Get medical advice/attention.  
 P362: Take off contaminated clothing.

**Storage:**

P405: Store locked up.

**Disposal:**

P501: Dispose of contents/container in accordance with local/national regulations.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	Wt.%	CAS
Sulfur	< 60	7704-34-9
Silica, Crystalline	< 50	14808-60-7
Sulfur Dioxide	< 0.5	7446-09-5
Hydrogen Sulfide	< 0.5	7783-06-4

**4. FIRST AID MEASURES**

**EYES:** Check for and remove all contact lenses. Flush eyes immediately with water or physiological saline for at least 15 minutes while lifting upper and lower lids. Do not use eye ointment. Seek medical attention.

**SKIN:** For Molten product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean dry bandage and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing as the flesh can be easily torn. Do not apply petroleum jelly, mineral oils or ointments.

For Solid product, remove dust by washing with soap and water. Remove contaminated clothing and launder separately.

**INHALATION:** If difficulty breathing, move to fresh air once. For acute overexposure, give oxygen if breathing is difficult. Apply artificial respiration if breathing has stopped. Keep patient warm and at rest. Seek immediate medical attention.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

**EYES:** Fumes from hot material may cause irritation. Hot material causes thermal burns.

**SKIN:** Prolonged or repeated skin contact may cause irritation. Contact with hot material causes thermal burns.

**INHALATION:** Upon burning toxic sulfur dioxide gas is produced. Sulfur dioxide gas is irritating to the eyes and respiratory tract causing burning of the eyes, tearing of the eyes, coughing and chest tightness. Sulfur can react with oxidizing materials and hydrocarbons to produce hydrogen sulfide gas. At low concentrations hydrogen sulfide is irritating to all moist tissues. At higher concentrations hydrogen sulfide is noted as a systemic poison which causes respiratory paralysis. Less than 1/2 hour exposure at 300-500 ppm can result in headache, dizziness, nausea, and pain in the respiratory tract. Paralysis of the breathing centers can occur after a few breaths at 1000-2000 ppm followed by collapse and quick death if removal to fresh air and restoration of breathing is not rapidly accomplished.

**5. FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Carbon dioxide, foam, dry chemicals, sand, earth, and steam.

**HAZARDOUS COMBUSTION PRODUCTS:** Combustion may produce hydrogen sulfide, sulfur oxides, carbon monoxide and carbon dioxide.

**EXPLOSION HAZARDS:** Not sensitive to mechanical impact or static discharge

**FIRE FIGHTING PROCEDURES:** Evolves Sulfur Dioxide and Hydrogen Sulfide. Use self contained breathing apparatus. Blanket flames with one of the above listed extinguishing media. **DO NOT USE WATER.**

**FIRE FIGHTING EQUIPMENT:** Toxic fumes will be evolved when this material is involved in a fire. Self-contained breathing apparatus should be available for fire fighters.

**FIRE EXPLOSION:** Hydrogen Sulfide combustion product may be explosive. Data as follows

Minimum Explosive concentration: <6%  
 Maximum Explosive Pressure: 41 psi (2.8 atm)  
 Average Pressure Rise: 840 psi/sec (48 atm/sec)  
 Maximum Pressure Rise: 2750 psi/sec (133 atm/sec)

Lower Explosive Limit: 3.1 to 4.3% by volume

**SENSITIVE TO STATIC DISCHARGE:** None

**SENSITIVITY TO IMPACT:** None

**HAZARDOUS DECOMPOSITION PRODUCTS:** Sulfur oxide combustion products may combine with water to form acids. Fighting fire with water may evolve Hydrogen Sulfide above its LEL (3.5%)

## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES:** Hot material: if the spill is large, then dike. Molten material should be allowed to cool then collected for disposal. Before attempting clean-up, refer to hazard information listed in this sheet.

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Avoid contact with eyes, skin, and clothing.

Avoid breathing dust.

For industrial use only!

Harmful if inhaled.

Do not take internally.

May cause irritation.

Wear chemical splash goggles, gloves, and protective clothing.

Use adequate ventilation and employ respiratory protection where dust or fumes may be generated.

Wash thoroughly after handling.

**STORAGE:** Store in a cool, dry place.

Keep container closed when not in use.

Keep away from food and drinking water.

Always mix well before using.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
EXPOSURE LIMITS				
Chemical Name	Type		ppm	mg/m <sup>3</sup>
Silica, Crystalline	OSHA PEL	TWA		5
		STEL	0.05	
	ACGIH TLV	TWA		0.025
		Supplier OEL	TWA	NL
Sulfur Dioxide	OSHA PEL	TWA	5	13
		ACGIH TLV	TWA	(2) NI
		STEL	(5) NI	
Hydrogen Sulfide	OSHA PEL	STEL	20	
	ACGIH TLV	TWA	10	NIC
		STEL	15	NIC

**ENGINEERING CONTROLS:** Provide adequate general or local ventilation to keep vapors below PELs. Control vapor concentration & keep below PEL and accepted TLVs if established. Spark-proof fans are required.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Safety glasses with side shields, chemical resistant goggles, or face shield. Contact lenses should not be worn.

**SKIN:** Heat resistant gloves and long sleeved shirts. Thoroughly launder clothing before re-use.

**RESPIRATORY:** Any dust respirator for 5 times PEL or less. Any fume respirator or high-efficiency particulate respirator for 10 times PEL or less. If TLV of any component is exceeded use appropriate respiratory protection or ventilate in accordance with OSHA Regulation 29 CFR Part 1910.

**PROTECTIVE CLOTHING:** NOTE: DO NOT place clothing with adherent sulfur cement in the clothes dryer as the sulfur may ignite. Be sure to empty sulfur particles from pockets and cuffs as well as remove all adherent pieces from clothing before laundering.

**WORK HYGIENIC PRACTICES:** Wash thoroughly after handling. Safety shower and eyewash station should be within direct access. Keep containers closed.

**OTHER USE PRECAUTIONS:** \*\*\*This product contains encapsulated silica. By OSHA letter of interpretation, the silica is not considered respirable in either the cement paste form or cured cement form. However, if the cured cement is polished, ground or chipped during processing, handling or use, the silica maybe released as an airborne respirable particle. In these instances appropriate personal protection equipment and local ventilation controls must be employed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** Sulfur.

**ODOR THRESHOLD:** Hydrogen Sulfide: 1 ppm

**APPEARANCE:** solid flakes or ingots

**COLOR:** Dark gray to black

**FLASH POINT AND METHOD:** (370°F)

**FLAMMABLE LIMITS:** 0 to 0

**AUTOIGNITION TEMPERATURE:** (478°F) to (511°F)

**VAPOR PRESSURE:** 27.75

**VAPOR DENSITY:** 27.75

**BOILING POINT:** > (800°F)

**MELTING POINT:** (225°F) to (248°F)

**SOLUBILITY IN WATER:** Insoluble

**SPECIFIC GRAVITY:** 2.1

## 10. STABILITY AND REACTIVITY

**REACTIVITY:** Yes

**HAZARDOUS POLYMERIZATION:** No

**STABILITY:** Stable under normal conditions of use and storage.

**CONDITIONS TO AVOID:** Avoid excessive heat and flame. May react with strong oxidants such as chlorates, bromides, and nitrates.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition or burning may produce toxic compounds such as carbon monoxide, carbon dioxide, sulfur oxides, and hydrogen sulfide. Sulfur oxides may combine with moisture to form acids.

**INCOMPATIBLE MATERIALS:** Avoid contact with water. Sulfur is moderately reactive. Mixture with chlorates, nitrates or other red label oxidizers may be explosive.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

**DERMAL LD<sub>50</sub>:** > 2020 mg/kg (rat)

**ORAL LD<sub>50</sub>:** > 5050 mg/kg (rat)

**INHALATION LC<sub>50</sub>:** > 9200 ppm / 4 hours (rat)

**SERIOUS EYE DAMAGE/IRRITATION:** Eye, Skin and Inhalation Irritant.

**GERM CELL MUTAGENICITY:** No Data Available

### CARCINOGENICITY

**IARC:** Silica is listed as having sufficient evidence to be a carcinogen in humans and in experimental animals, for the carcinogenicity of quartz and cristobalite. The overall IARC evaluation was that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (group 1).

**NTP:** The National Toxicology Program, in its Ninth Annual report on Carcinogens, classified "silica, crystalline (respirable)" as a known human carcinogen.

**OSHA:** Crystalline Silica (Quartz) is not regulated by the US Occupational Safety and Health Administration as a carcinogen.

**NOTES:** Silica is listed by IARC and NTP as having sufficient evidence to be a carcinogen in humans and in experimental animals for the carcinogenicity of quartz and cristobalite. The overall IARC evaluation was that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (group 1).

## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION:** Crystalline silica (quartz) is not known to be ecotoxic. There is no data that suggests that crystalline silica (quartz) is toxic to birds, fish, invertebrates, microorganisms or plants.

### AQUATIC TOXICITY (ACUTE)

**96-HOUR LC<sub>50</sub>:** TLM 96 > 1000 ppm

**Notes:** Fungicide

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Material should be disposed of as hazardous waste in accordance with Federal, state and local environmental regulations.

**EMPTY CONTAINER:** Disposal must be made according to official regulations.

## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Not Regulated

**TECHNICAL NAME:** High Temperature Bonding Mortar

**PRIMARY HAZARD CLASS/DIVISION:** Not Regulated

**UN/NA NUMBER:** NA

**PACKING GROUP:** NA

## 15. REGULATORY INFORMATION

### UNITED STATES

#### DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

R20/21: Harmful by inhalation and in contact with skin.

R36/37/38: Irritating to eyes, respiratory system and skin.

R44: Risk of explosion if heated under confinement.

S13: Keep away from food, drink and animal feedingstuffs.

S16: Keep away from sources of ignition — No smoking.

S20/21: When using do not eat, drink or smoke.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S3/9/49: Keep only in the original container in a cool, well-ventilated place.

S36/37: Wear suitable protective clothing and gloves.

S59: Refer to manufacturer/supplier for information on recovery/recycling.

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HAZARD CATEGORIES:** Chronic. Carcinogen. Irritant.

**313 REPORTABLE INGREDIENTS:** There are no listed chemicals above detection limits in this compound.

**TITLE III NOTES:** None above detection limits.

#### CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** Crystalline silica (Quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Acts (CERCLA), 40 CFR 302

Chemical Name	Wt.%	CERCLA RQ
Hydrogen Sulfide	< 0.5	100

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

Chemical Name	CAS
Sulfur	7704-34-9
Silica, Crystalline	14808-60-7
Sulfur Dioxide	7446-09-5
Hydrogen Sulfide	7783-06-4

**TSCA STATUS:** Components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

**CLEAN AIR ACT**

Chemical Name	Wt. %	CAS
Sulfur Dioxide	< 0.5	7446-09-5
Hydrogen Sulfide	< 0.5	7783-06-4

**CALIFORNIA PROPOSITION 65:** Known to the State of California to cause cancer or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Act of 1986".

It has not been determined and cannot be ascertained that this product would not expose users to the listed chemicals at the very low level prescribed in the regulations. Therefore, it is the user's responsibility to determine if the percent of the hazardous / carcinogenic ingredients listed elsewhere in the SDS comply with State of California regulations.

**CANADA****WHMIS HAZARD SYMBOL AND CLASSIFICATION**

Toxic

Flammable  
Solid

R20/21: Harmful by inhalation and in contact with skin.

R36/37/38: Irritating to eyes, respiratory system and skin.

R44: Risk of explosion if heated under confinement.

S13: Keep away from food, drink and animal feedingstuffs.

S16: Keep away from sources of ignition — No smoking.

S20/21: When using do not eat, drink or smoke.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S3/9/49: Keep only in the original container in a cool, well-ventilated place.

S36/37: Wear suitable protective clothing and gloves.

S59: Refer to manufacturer/supplier for information on recovery/recycling.

**WHMIS CLASS:** When supplied in Ingot or flaked form in packages of 400 kilograms or less, it is NOT a WHMIS controlled product

**DOMESTIC SUBSTANCE LIST (INVENTORY):** Components included on inventory

**16. OTHER INFORMATION**

**Date Revised:** 03/13/2018

**REVISION SUMMARY:** This SDS replaces the 03/21/2016 SDS. Revised: **Section 1:** Date Issued.



**HMIS RATING**

<b>HEALTH</b>	<input type="checkbox"/>	<b>2</b>
<b>FLAMMABILITY</b>		<b>1</b>
<b>PHYSICAL HAZARD</b>		<b>0</b>
<b>PERSONAL PROTECTION</b>		<b>H</b>