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**Section 1: IDENTIFICATION**

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**1.1 PRODUCT IDENTIFIER**

**Product Name:** #1 Gray  
**Product Code:** Not available.

**1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE**

**Use:** Non-Destructive Testing.

**1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET**

**Name/Address:** Magnaflux  
155 Harlem Ave.  
Glenview, IL  
60025  
**Telephone Number:** 847-657-5300

**1.4 EMERGENCY TELEPHONE NUMBER**

**Emergency Telephone Number:** CHEMTREC 800-424-9300  
**Date of Preparation:** July 11, 2014  
**Revision Date:** October 20, 2015      **Version #:** 2.0

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**Section 2: HAZARD(S) IDENTIFICATION**

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**2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012**

**Hazard class**  
Not hazardous by OSHA HazCom 2012 criteria.

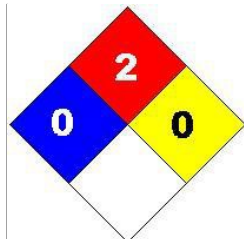
**2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012**

**Hazard Pictogram:** Not applicable.  
**Signal Word:** Not applicable.  
**Hazard Statement:** Not applicable.  
**Prevention:** Not applicable.  
**Response:** Not applicable.  
**Storage:** Not applicable.  
**Disposal:** Not applicable.

**2.3 ADDITIONAL INFORMATION**

**Hazards not otherwise classified:** Not applicable.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

**Mexico Classification:**


**Blue = Health   Red = Flammability   Yellow = Reactivity   White = Special**

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

**WHMIS Classification(s):**

Not controlled

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**
**3.1 MIXTURES**

Ingredient	UN #	H / F / R / *	CAS No	Wt. %
Iron, elemental	Not available	Not available	7439-89-6	60 - 100
Titanium dioxide	Not available	1/0/0	13463-67-7	7 - 13
Silica, amorphous, fumed	Not available	Not available	7631-86-9	0.5 - 1.5

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

\*Per NOM-018-STPS-2000

**Section 4: FIRST- AID MEASURES**
**4.1 DESCRIPTION OF THE FIRST AID MEASURE**

<b>Eye:</b>	In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
<b>Skin:</b>	If irritation occurs, flush skin with plenty of water. Call a physician if irritation persists.
<b>Inhalation:</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

**4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**

<b>Eye:</b>	Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
<b>Skin:</b>	Dust may cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
<b>Inhalation:</b>	Dust may cause respiratory tract irritation.
<b>Ingestion:</b>	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

**4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED**

<b>Note to Physicians:</b>	Symptoms may not appear immediately.
<b>Specific Treatments:</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

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**Section 5: FIRE-FIGHTING MEASURES**

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**5.1 FLAMMABILITY**

<b>Flammability:</b>	This product is not flammable by WHMIS/OSHA criteria. This product has a flammability rating of 2 by NOM-018-STPS-2000 criteria.
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**5.2 EXTINGUISHING MEDIA**

<b>Suitable Extinguishing Media:</b>	Treat for surrounding material.
<b>Unsuitable Extinguishing Media:</b>	Do not use a direct stream of water.

**5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL**

**Products of Combustion:** May include, and are not limited to: oxides of carbon, metal oxides.

**Explosion Data:**

**Sensitivity to Mechanical Impact:** Not available.

**Sensitivity to Static Discharge:** Not available.

**5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS**

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). If improperly handled, stored and/or exposed to an ignition source, this material may burn.

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**Section 6: ACCIDENTAL RELEASE MEASURES**

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**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP**

<b>Methods for Containment:</b>	Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
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**Methods for Cleaning-Up:** Vacuum or sweep material and place in a disposal container. Provide ventilation.

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**Section 7: HANDLING AND STORAGE**

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**7.1 PRECAUTIONS FOR SAFE HANDLING**

**Handling:** Keep away from heat, sparks, and flame. Avoid contact with skin and eyes. Do not swallow. Good housekeeping is important to prevent accumulation of dust. Avoid generating and breathing dust. Use only in well-ventilated areas. Handle and open container with care. When using do not eat or drink. (See section 8)

**General Hygiene Advice:** Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

**7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

**Storage:** Keep out of the reach of children. Store in dust-tight, dry, labeled containers. Keep containers closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Store in a cool, well-ventilated place, away from incompatibles. Keep away from sources of ignition. (See section 10)

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**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**8.1 CONTROL PARAMETERS**

**Exposure Guidelines**

<b>Occupational Exposure Limits</b>			
<b>Ingredient</b>	<b>OSHA-PEL</b>	<b>ACGIH-TLV</b>	<b>AEL<sup>2</sup>-Supplier</b>
Iron, elemental	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	Not available
Titanium dioxide	15 mg/m <sup>3</sup> (total dust)	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> (8 & 12 hour TWA total dust) 5 mg/m <sup>3</sup> (8 & 12 hour TWA respirable dust)
Silica, amorphous, fumed	20 mppcf; (80)/(% SiO <sub>2</sub> ) mg/m <sup>3</sup>	Not available	Not available

<sup>2</sup>AEL is the chemical supplier's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**8.2 EXPOSURE CONTROLS**

**Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

**8.3 INDIVIDUAL PROTECTIVE MEASURES****Personal Protective Equipment:**

**Eye/Face Protection:** Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

**Skin Protection:**

**Hand Protection:** Wear suitable gloves.

**Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

**General Health and Safety Measures:** Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

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**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Powder.
<b>Color:</b>	Gray.
<b>Odor:</b>	Odorless.
<b>Odor Threshold:</b>	Not available.
<b>Physical State:</b>	Solid.
<b>pH:</b>	Not available.
<b>Melting Point/Freezing Point:</b>	Not available.
<b>Initial Boiling Point and Boiling Range:</b>	Not available.
<b>Flash Point:</b>	Not available.
<b>Evaporation Rate:</b>	Not available.
<b>Flammability:</b>	Not flammable.
<b>Lower Flammability/Explosive Limit:</b>	Not available.
<b>Upper Flammability/Explosive Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not available.
<b>Relative Density/Specific Gravity:</b>	Not available.
<b>Density:</b>	190 lb/ft <sup>3</sup>
<b>Solubility:</b>	Insoluble.
<b>Partition coefficient: n-octanol/water:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Decomposition Temperature:</b>	Not available.

**Viscosity:** Not available.  
**Oxidizing Properties:** Not available.  
**Explosive Properties:** Not available.

### Section 10: STABILITY AND REACTIVITY

#### 10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

#### 10.2 CHEMICAL STABILITY

Stable under normal storage conditions. Keep dry in storage.

#### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

#### 10.4 CONDITIONS TO AVOID

Incompatible materials. Keep away from heat, sparks, and flame.

#### 10.5 INCOMPATIBLE MATERIALS

Oxidizers. Acids.

#### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon, metal oxides.

### Section 11: TOXICOLOGICAL INFORMATION

#### 11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

**Likely Routes of Exposure:** Skin contact, eye contact, inhalation, and ingestion.

**Symptoms related to physical/chemical/toxicological characteristics:**

**Eye:** Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

**Skin:** Dust may cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

**Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Inhalation:** Dust may cause respiratory tract irritation.

**Acute Toxicity:**

Ingredient	IDLH	LC50	LD50
Iron, elemental	2500 mg Fe/m <sup>3</sup>	Not available.	Oral 30 g/kg, rat
Titanium dioxide	5000 mg/m <sup>3</sup>	Not available.	Oral >10000 mg/kg, rat
Silica, amorphous, fumed	3000 mg/m <sup>3</sup>	Inhalation >2.2 mg/l/1h, rat	Oral >5000 mg/kg, rat; Dermal >2000 mg/kg, rabbit

#### Calculated overall Chemical Acute Toxicity Values

LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
Not available.	> 2000 mg/kg, rat	Not available.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Iron, elemental	Not listed.
Titanium dioxide	G-A4, I-2B, CP65 (airborne, unbound particles of respirable size)
Silica, amorphous, fumed	I-3

\* See Section 15 for more information.

## 11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

<b>Skin Corrosion/Irritation:</b>	Based on available data, the classification criteria are not met.
<b>Serious Eye Damage/Irritation:</b>	Based on available data, the classification criteria are not met.
<b>Respiratory Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>Skin Sensitization:</b>	Based on available data, the classification criteria are not met.
<b>STOT-Single Exposure:</b>	Based on available data, the classification criteria are not met.
<b>Chronic Health Effects:</b>	
<b>Carcinogenicity:</b>	Based on available data, the classification criteria are not met. The supplier of the titanium dioxide used in this product concludes that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace (see section 8 for exposure limits determined by the supplier).
<b>Germ Cell Mutagenicity:</b>	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity:</b>	
<b>Developmental:</b>	Based on available data, the classification criteria are not met.
<b>Teratogenicity:</b>	Based on available data, the classification criteria are not met.
<b>Embryotoxicity:</b>	Based on available data, the classification criteria are not met.
<b>Fertility:</b>	Based on available data, the classification criteria are not met.
<b>STOT-Repeated Exposure:</b>	Based on available data, the classification criteria are not met.
<b>Aspiration Hazard:</b>	Based on available data, the classification criteria are not met.
<b>Toxicologically Synergistic Materials:</b>	Not available.
<b>Other Information:</b>	Not available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1 ECOTOXICITY

**Acute/Chronic Toxicity:** May cause long-term adverse effects in the aquatic environment.

### 12.2 PERSISTENCE AND DEGRADABILITY

Not available.

### 12.3 BIOACCUMULATIVE POTENTIAL

**Bioaccumulation:** Not available.

## 12.4 MOBILITY IN SOIL

Not available.

## 12.5 OTHER ADVERSE EFFECTS

Not available.

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### Section 13: DISPOSAL CONSIDERATIONS

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#### 13.1 WASTE TREATMENT METHODS

**Disposal Method:** This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

**Other disposal recommendations:** Not available.

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### Section 14: TRANSPORT INFORMATION

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#### 14.1 UN NUMBER

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not regulated.	Not regulated.	Not regulated.

#### 14.2 UN PROPER SHIPPING NAME

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not applicable.	Not applicable.	Not applicable.

#### 14.3 TRANSPORT HAZARD CLASS (ES)

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not applicable.	Not applicable.	Not applicable.

#### 14.4 PACKING GROUP

<b>DOT</b>	<b>TDG</b>	<b>NOM-004-SCT2-1994</b>
Not applicable.	Not applicable.	Not applicable.

#### 14.5 ENVIRONMENTAL HAZARDS

Not available.

#### 14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not available.

#### 14.7 SPECIAL PRECAUTIONS FOR USER

Do not handle until all safety precautions have been read and understood.

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### Section 15: REGULATORY INFORMATION

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#### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**US:** SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

**Mexico:** SDS prepared pursuant to NOM-018-STPS-2000.



SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Iron, elemental	Not listed.	Not listed.	Not listed.	Not listed.
Titanium dioxide	Not listed.	Not listed.	Not listed.	Not listed.
Silica, amorphous, fumed	Not listed.	Not listed.	Not listed.	Not listed.

### State Regulations

#### California Proposition 65:

This product contains a chemical known to the State of California to cause cancer. The listing of titanium dioxide is for airborne, unbound particles of respirable size. The listing is not applicable to titanium dioxide when it remains bound within a product matrix.

#### Global Inventories:

Ingredient	Canada DSL/NDSL	USA TSCA
Iron, elemental	DSL	Yes.
Titanium dioxide	DSL	Yes.
Silica, amorphous, fumed	DSL	Yes.

#### NFPA-National Fire Protection Association:

<b>Health:</b>	0
<b>Fire:</b>	2
<b>Reactivity:</b>	0

#### HMIS-Hazardous Materials Identification System:

<b>Health:</b>	0
<b>Fire:</b>	2
<b>Physical Hazard:</b>	0

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

#### SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

**CP65 California Proposition 65**

**OSHA (O) Occupational Safety and Health Administration.**

**ACGIH (G) American Conference of Governmental Industrial Hygienists.**

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

**IARC (I) International Agency for Research on Cancer.**

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

**NTP (N) National Toxicology Program.**

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

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**Section 16: OTHER INFORMATION**

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**Prepared for:** Magnaflux

**End of Safety Data Sheet**