

Safety Data Sheet

#1 GRAY

SECTION 1: IDENTIFICATION

1.1. PRODUCT IDENTIFIER

Trade name: #1 Gray

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses of the substance or mixture: Non-destructive testing
Restricted to professional users.

Uses advised against : None known.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company and address: **Magnaflux**
155 Harlem Ave.
60025 Glenview, IL
USA
847-657-5300
www.magnaflux.com/Magnaflux

Distributor: Address:

E-mail: support@magnaflux.com

SDS date: 10/25/2024

SDS Version: 5.0

1.4. EMERGENCY TELEPHONE NUMBER

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case

See also section 4 "First aid measures".

Emergency number: CHEMTREC 800-424-9300

SECTION 2: HAZARD(S) IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Not classified according to HCS (29 CFR 1910.1200)

2.2. LABEL ELEMENTS

Hazard pictogram(s): Not applicable.

Signal word: Not applicable.

Hazard statement(s):

Precautionary statement(s):

General: -

Prevention: -

Response:	-
Storage:	-
Disposal:	-
Additional labelling:	0.50 % of the mixture consists of ingredients of unknown toxicity. Contains 0.50 % of components with unknown hazards to the aquatic environment

2.3. OTHER HAZARDS

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Not applicable. This product is a mixture.

3.2. MIXTURES

Product/substance	Identifiers	% w/w	Classification	Note
Iron	CAS No.: 7439-89-6	80-95%		
titanium dioxide	CAS No.: 13463-67-7	5-10%		

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

OTHER INFORMATION

-

SECTION 4: FIRST-AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General information:	If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
Inhalation:	In case of discomfort: bring the person into fresh air.
Skin contact:	Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
Eye contact:	Rinse gently with lukewarm water. Remove any contact lenses if this is easy to do. Continue rinsing. In case of persistent eye irritation or discomfort: Seek medical help.
Ingestion:	Rinse and flush mouth thoroughly and consume large quantities of water. In case of continued discomfort: seek medical assistance and bring this safety data sheet.
Burns:	Not applicable.

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

High amounts of dust can cause coughing and general irritation of the respiratory airways.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

INFORMATION TO MEDICS

Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Explosion: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. ADVICE FOR FIREFIGHTERS

No specific requirements.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. ENVIRONMENTAL PRECAUTIONS

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Collect spills carefully. Moist the material with water in order to prevent the formation and propagation of dust.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. REFERENCE TO OTHER SECTIONS

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

May form combustible dust concentrations in air.

Take action to prevent static discharges.

Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Avoid contact during pregnancy and while nursing.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.
This product contains titanium dioxide, which may contain trace amounts of lead. Testing on this product showed lead levels below the detectable limit (<10 ppm, EPA Method 6010C).

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Avoid the suspension of dust in the air.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Use non-sparking tools.

Recommended storage material: Keep only in original packaging.

Storage conditions: 10 - 30°C

Incompatible materials: Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. SPECIFIC END USE(S)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Iron

Long term exposure limit (OSHA Table Z-1) (mg/m³): 10

Long term exposure limit (ACGIH TLV) (mg/m³): 5 (resp.)

Long term exposure limit (NIOSH REL) (mg/m³): 5 (dust and fume)

titanium dioxide

Long term exposure limit (ACGIH TLV) (mg/m³): 10

Long term exposure limit (NIOSH REL) (mg/m³): Potential occupational carcinogen; (ultrafine particles) / 2.4 (fine) / 0.3 (ultrafine)

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. EXPOSURE CONTROLS

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: When transferring the materials, dust clouds should be kept at an absolute minimum. Handling should be slow and deliberate. The materials should be transferred from one container to another using a non-sparking, conductive metal scoop.
When mixing the material with other dry ingredients, frictional heat should be avoided. The best type of mixer for a dry mixing operation is one that contains no moving parts, but rather affects a tumbling action, such as a conical blender. Introduction of an inert atmosphere in the blender is highly recommended since dust clouds are generated. All equipment must be well grounded.
Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits:	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
Appropriate technical measures:	Airborne gas and dust concentrations must be kept at a minimum. Provide efficient mechanical ventilation. If not possible use suitable respiratory equipment. It is recommended that all dust control equipment such as local exhaust ventilation contain an explosion suppression system. Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and showers are clearly marked.
Hygiene measures:	Wash hands after use.
Measures to avoid environmental exposure:	No specific requirements.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

Generally:	Use only protective equipment with a recognized certification mark, e.g. the UL mark.
------------	---

Respiratory Equipment:

Type	Class	Colour	Standards	
In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.				

Skin protection:
No specific requirements.

Hand protection:
No specific requirements.

Eye protection:

Type	Standards	
Safety glasses	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Powder
Color:	Gray
Odor:	None
Odor threshold (ppm):	No data available
pH:	Not applicable
Density (g/cm ³):	3.044 (68 °F)
Kinematic viscosity:	Not applicable
Particle characteristics:	No data available

PHASE CHANGES

Melting point/freezing point (°F):	No data available
Softening point/range (°F):	Does not apply to solids.
Boiling point (°F):	No data available
Vapor pressure:	No data available
Relative vapor density:	No data available
Decomposition temperature (°F):	No data available

DATA ON FIRE AND EXPLOSION HAZARDS

Flash point (°F):	No data available
Flammability (°F):	No data available
Auto-ignition temperature (°F):	No data available
Explosion limits (% v/v):	No data available

SOLUBILITY

Solubility in water:	Insoluble
n-octanol/water coefficient (LogKow):	No data available
Solubility in fat (g/L):	No data available

9.2. OTHER INFORMATION

Formation of explosible dust/air mixtures:	Yes
Evaporation rate (n-butylacetate = 100):	No data available
Other physical and chemical parameters:	No data available.
Oxidizing properties:	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No data available.

10.2. CHEMICAL STABILITY

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. POSSIBILITY OF HAZARDOUS REACTIONS, INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCIES

None known.

10.4. CONDITIONS TO AVOID

Avoid the suspension of dust in the air.

10.5. INCOMPATIBLE MATERIALS

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

Product/substance	titanium dioxide
Test method:	OECD 425
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	>5000 mg/kg bw

Product/substance	titanium dioxide
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	>10000 mg/kg

Product/substance	titanium dioxide
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	>6.82 mg/L

SKIN CORROSION/IRRITATION

Based on available data, the classification criteria are not met.

SERIOUS EYE DAMAGE/IRRITATION

Based on available data, the classification criteria are not met.

RESPIRATORY SENSITISATION

Based on available data, the classification criteria are not met.

SKIN SENSITISATION

Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY

Based on available data, the classification criteria are not met.

CARCINOGENICITY

Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY

Based on available data, the classification criteria are not met.

STOT-SINGLE EXPOSURE

Based on available data, the classification criteria are not met.

STOT-REPEATED EXPOSURE

Based on available data, the classification criteria are not met.

ASPIRATION HAZARD

Based on available data, the classification criteria are not met.

LONG TERM EFFECTS

None known.

OTHER INFORMATION

Iron has been classified by IARC as a group 3 carcinogen.

titanium dioxide has been classified by IARC as a group 2B carcinogen.

SECTION 12: ECOLOGICAL INFORMATION**12.1. TOXICITY**

Product/substance	Iron
Species:	Fish, Morone saxatilis
Duration:	96 hours
Test:	LC50
Result:	13.6 mg/L

Product/substance	Iron
Species:	Fish, Cyprinus carpio
Duration:	96 hours
Test:	LCLo
Result:	0.56 mg/L

Product/substance	titanium dioxide
Test method:	OECD 203
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	>10000 mg/L

Product/substance	titanium dioxide
Test method:	OECD 202
Species:	Daphnia, Daphnia magna
Duration:	48 hours
Test:	LC50
Result:	>1000 mg/L

Product/substance	titanium dioxide
Test method:	OECD 201
Species:	Algae, Pseudokirchneriella subcapitata
Test:	EC50
Result:	61 mg/L

Product/substance	titanium dioxide
Test method:	OECD 209
Species:	Bacteria
Compartment:	Activated Sludge Plant
Duration:	3 hours
Test:	EC50

Result: >10000 mg/L

12.2. PERSISTENCE AND DEGRADABILITY

Based on available data, the classification criteria are not met.

12.3. BIOACCUMULATIVE POTENTIAL

Based on available data, the classification criteria are not met.

12.4. MOBILITY IN SOIL

No data available.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. OTHER ADVERSE EFFECTS

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA HAZARDOUS WASTE ("P" AND "U" LIST) (40 CFR 261)

None of the components are listed

SPECIFIC LABELLING

CONTAMINATED PACKING

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN / ID		14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
DOT	-	-	Transport hazard class: Not regulated for transport	-	No	See below for additional information.
IMDG	-	-	Transport hazard class: Not regulated for transport	-	No	See below for additional information.
IATA	-	-	Transport hazard class: Not regulated for transport	-	No	See below for additional information.

* Packing group

** Environmental hazards

ADDITIONAL INFORMATION

Not dangerous goods according to ADR, IATA and IMDG.

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.7. TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

15.2. U.S. FEDERAL REGULATIONS

TSCA (the non-confidential portion):	Iron is listed titanium dioxide is listed Linseed oil is listed
Clean Air Act:	None of the components are listed
EPCRA Section 302:	None of the components are listed
EPCRA Section 304:	None of the components are listed
EPCRA section 313:	None of the components are listed
CERCLA:	None of the components are listed
Hazardous chemical inventory reporting:	This product is not subject to Tier II reporting.

STATE REGULATIONS

California / Prop. 65:	See product label for Prop 65 Statement (if applicable)
Massachusetts / Right To Know Act:	Iron is listed titanium dioxide is listed
New Jersey / Right To Know Act:	Iron / Substance number: 1036 — titanium dioxide / Substance number: 1861 —
New York / Right To Know Act:	Iron is listed Iron is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds — titanium dioxide is listed titanium dioxide is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds —

Pennsylvania / Right To
Know Act:

Iron is listed

—
titanium dioxide is listed

—
Linseed oil is listed

—

NFPA

Health hazard: 0

Fire hazard: 2

Instability hazard: 0

15.4. RESTRICTIONS FOR APPLICATION

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. DEMANDS FOR SPECIFIC EDUCATION

No specific requirements.

15.6. ADDITIONAL INFORMATION

Not applicable.

15.7. CHEMICAL SAFETY ASSESSMENT

No

15.8. SOURCES

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION

THE FULL TEXT OF IDENTIFIED USES AS MENTIONED IN SECTION 1

None known.

ABBREVIATIONS AND ACRONYMS

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified

by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

ADDITIONAL INFORMATION

Not applicable.

THE SAFETY DATA SHEET IS VALIDATED BY

Magnaflux

OTHER

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en