1. Identification

Product Name: Titanium, powder

Cat No.: AC421010000; AC421010100; AC421011000; AC421015000

CAS-No: 7440-32-6

Synonyms: No information available

Recommended Use: Laboratory chemicals.

Uses advised against: Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11

Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99

CHEMTREC Tel. No.US: 001-800-424-9300 / Europe:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Pyrophoric solids: Category 1

Combustible dust: Yes

Label Elements

Signal Word
Danger

Hazard Statements
May form combustible dust concentrations in air
Catches fire spontaneously if exposed to air

Precautionary Statements
Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Do not allow contact with air
Wear protective gloves/protective clothing/eye protection/face protection

Skin
Brush off loose particles from skin. Immerse in cool water/wrap with wet bandages

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

Storage
Store under an inert atmosphere
Store in a well-ventilated place. Keep container tightly closed

Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium, powder</td>
<td>7440-32-6</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation
Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects
None reasonably foreseeable.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Dry sand. approved class D extinguishers.

Unsuitable Extinguishing Media
No information available

Flash Point
No information available

Method -
No information available

Autoignition Temperature
250 °C / 482 °F

Explosion Limits
Upper
No data available
Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Flammable. Dust can form an explosive mixture in air. Combustible material.
Hazardous Combustion Products
None known

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA
<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
<td>1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**6. Accidental release measures**

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

**7. Handling and storage**

Handling
Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage
Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Flammables area. Store under an inert atmosphere.

**8. Exposure controls / personal protection**

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Long sleeved clothing.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

Physical State
Powder Solid

Appearance
Grey

Odor
Odorless

Odor Threshold
No information available

pH
No information available

Melting Point/Range
1660 °C / 3020 °F

Boiling Point/Range
3287 °C / 5948.6 °F @ 760 mmHg

Flash Point
No information available

Evaporation Rate
Not applicable
10. Stability and reactivity

Reactive Hazard  Yes


Conditions to Avoid  Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Incompatible products. Exposure to moist air or water.

Incompatible Materials  Acids, Strong oxidizing agents, Strong acids, Halogens, oxygen, Metals, Carbon dioxide (CO2), halocarbons

Hazardous Decomposition Products  None under normal use conditions

Hazardous Polymerization  Hazardous polymerization does not occur.

Hazardous Reactions  None under normal processing.

11. Toxicological information

Acute Toxicity  No acute toxicity information is available for this product

Product Information  No acute toxicity information is available for this product

Component Information  No information available

Toxicologically Synergistic  No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation  No information available

Sensitization  No information available

Carcinogenicity  The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
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</thead>
<tbody>
<tr>
<td>Titanium, powder</td>
<td>7440-32-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects  No information available

Reproductive Effects  No information available.

Developmental Effects  No information available.

Teratogenicity  No information available.

STOT - single exposure  None known

STOT - repeated exposure  None known
12. Ecological information

Ecotoxicity
Do not empty into drains.

Persistence and Degradability
Insoluble in water

Bioaccumulation/Accumulation
No information available.

Mobility
Is not likely mobile in the environment due its low water solubility.

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
UN-No: UN2546
Proper Shipping Name: TITANIUM POWDER, DRY
Hazard Class: 4.2
Packing Group: II

TDG
UN-No: UN2546
Proper Shipping Name: TITANIUM POWDER, DRY
Hazard Class: 4.2
Packing Group: II

IATA
UN-No: UN2546
Proper Shipping Name: TITANIUM POWDER, DRY
Hazard Class: 4.2
Packing Group: II

IMDG/IMO
UN-No: UN2546
Proper Shipping Name: TITANIUM POWDER, DRY
Hazard Class: 4.2
Packing Group: II

15. Regulatory information

All of the components in the product are on the following Inventory lists: Australia Complete Regulatory Information contained in following SDS’s X = listed China Canada The product is classified and labeled according to EC directives or corresponding national laws The product is classified and labeled in accordance with Directive 1999/45/EC Europe TSCA Korea Philippines U.S.A. (TSCA) Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) Korea (ECL) China (IECSC) Japan (ENCS) Philippines (PICCS)

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
</table>

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Titanium, powder

<table>
<thead>
<tr>
<th>Legend:</th>
</tr>
</thead>
<tbody>
<tr>
<td>X - Listed</td>
</tr>
<tr>
<td>E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.</td>
</tr>
<tr>
<td>F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.</td>
</tr>
<tr>
<td>N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.</td>
</tr>
<tr>
<td>P - Indicates a commenced PMN substance</td>
</tr>
<tr>
<td>R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.</td>
</tr>
<tr>
<td>S - Indicates a substance that is identified in a proposed or final Significant New Use Rule</td>
</tr>
<tr>
<td>T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.</td>
</tr>
<tr>
<td>XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).)</td>
</tr>
<tr>
<td>Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.</td>
</tr>
<tr>
<td>Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.</td>
</tr>
</tbody>
</table>

**U.S. Federal Regulations**

| TSCA 12(b) | Not applicable |
| SARA 313 | Not applicable |
| SARA 311/312 Hazard Categories | See section 2 for more information |
| CWA (Clean Water Act) | Not applicable |
| Clean Air Act | Not applicable |
| OSHA Occupational Safety and Health Administration | Not applicable |
| CERCLA | Not applicable |
| California Proposition 65 | This product does not contain any Proposition 65 chemicals |

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
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<tbody>
<tr>
<td>Titanium, powder</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**U.S. Department of Transportation**

- Reportable Quantity (RQ): N
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade**

No information available

### 16. Other information

**Prepared By**

Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Creation Date**

14-May-2010

**Revision Date**

23-Jan-2018

**Print Date**

23-Jan-2018
Titanium, powder

Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS