



SAFETY DATA SHEET

Issue Date 01-Apr-2020

Revision Date 01-Apr-2020

Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Code SAC032
Product Name Zirconium Tungstate
Synonyms Zirconium Tungstate; Zirconium Tungsten Oxide, Tungsten Zirconium Oxide (Product #359)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Chemical intermediate

Uses advised against

1.3. Details of the supplier of the safety data sheet

Manufacturer

ATI, 1000 Six PPG Place, Pittsburgh, PA 15222 USA

1.4. Emergency telephone number

Emergency Telephone Chemtrec: +1-703-741-5970

Section 2: HAZARDS IDENTIFICATION

This material is classified per Regulation (EC) No 1272/2008.

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

| | |
|--|------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Specific target organ toxicity — single exposure | Category 3 |

2.2. Label elements

Emergency Overview

Warning

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation



| | | |
|--------------------------|-----------------------------|------------------------|
| Appearance Powder | Physical state Solid | Odour Odourless |
|--------------------------|-----------------------------|------------------------|

Precautionary Statements - Prevention

Avoid breathing dust/fume
 Wash hands thoroughly after handling
 Use only in well-ventilated areas
 Wear protective gloves/protective clothing/eye protection

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If skin irritation occurs: Get medical advice/attention
 If eye irritation persists: Get medical advice/attention
 Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store in a well-ventilated place
 Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms Zirconium Tungstate: Zirconium Tungsten Oxide, Tungsten Zirconium Oxide (Product #359).

| Chemical Name | EC No | CAS No | Weight-% |
|--------------------------------|-----------|------------|----------|
| Ditungsten Zirconium Octaoxide | 240-876-3 | 16853-74-0 | >99 |

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin Contact Wash off immediately with soap and plenty of water.

Eye contact Flush with water for 15 minutes. See a physician.

Ingestion IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms May cause skin, eye, and respiratory tract irritation.

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

Note to doctors Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Non-combustible.

Unsuitable extinguishing media

Non-combustible

5.2. Special hazards arising from the substance or mixture

Non-combustible

Hazardous combustion products Not applicable.

5.3. Advice for firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required.

For emergency responders

Use personal protective equipment as required.

6.2. Environmental precautions

Collect spillage to prevent release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Sweep or shovel material into dry containers. Avoid creating uncontrolled dust.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Store in a well-ventilated place. Keep container tightly closed.

Incompatible materials

Halogens.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

| Chemical Name | European Union | United Kingdom | France | Spain | Germany |
|--|---|--|--|--|--|
| Ditungsten Zirconium Octaoxide 16853-74-0 | - | TWA: 5 mg/m ³ | - | STEL: 10 mg/m ³ TWA: 5 mg/m ³ | - |
| Chemical Name | Italy | Portugal | Netherlands | Finland | Denmark |
| Ditungsten Zirconium Octaoxide 16853-74-0 | - | STEL: 10 mg/m ³ TWA: 5 mg/m ³ | - | TWA: 5 mg/m ³ TWA: 1 mg/m ³ | TWA: 5 mg/m ³ |
| Chemical Name | Austria | Switzerland | Poland | Norway | Ireland |
| Ditungsten Zirconium Octaoxide 16853-74-0 | STEL 10 mg/m ³ TWA: 5 mg/m ³ | TWA: 5 mg/m ³ | STEL: 10 mg/m ³ TWA: 5 mg/m ³ | TWA: 5 mg/m ³ STEL: 5 mg/m ³ | TWA: 5 mg/m ³ STEL: 10 mg/m ³ |

Derived No Effect Level (DNEL) No DNELs are available for this product

Predicted No Effect Concentration (PNEC) No PNECs are available for this product.

8.2. Exposure controls

Engineering Controls Avoid generation of uncontrolled particles.

Personal protective equipment

Eye/face protection

When airborne particles may be present, appropriate eye protection is recommended. For example, tight-fitting goggles, foam-lined safety glasses or other protective equipment that shield the eyes from particles.

Skin and body protection

Wear protective gloves.

Respiratory protection

When particulates/fumes/gases are generated and if exposure limits are exceeded or irritation is experienced, proper approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminate concentrations. Respiratory protection must be provided in accordance with current local regulations.

Environmental exposure controls Section 6: ACCIDENTAL RELEASE MEASURES.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | | | |
|-----------------------|--------------------|------------------------|----------------|
| Physical state | Solid | Odour | Odourless |
| Appearance | Powder | Odour threshold | Not applicable |
| Colour | white, light green | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------|---------------|-------------------------|
| pH | - | Not applicable |
| Melting point / freezing point | - | Not applicable |
| Boiling point / boiling range | - | Not applicable |
| Flash point | - | Not applicable |
| Evaporation rate | - | Not applicable |
| Flammability (solid, gas) | - | Not flammable |
| Flammability Limit in Air | | |
| Upper flammability limit: | | - |

| | | |
|---------------------------|----------------|----------------|
| Lower flammability limit | - | - |
| Vapour pressure | - | Not applicable |
| Vapour density | - | Not applicable |
| Specific Gravity | 5.10 | |
| Water solubility | Insoluble | |
| Solubility(ies) | | |
| Partition coefficient | - | Not applicable |
| Autoignition temperature | - | Not applicable |
| Decomposition temperature | 770°C/ 1420°F | |
| Kinematic viscosity | - | Not applicable |
| Dynamic viscosity | - | Not applicable |
| Explosive properties | Not applicable | |
| Oxidising properties | Not applicable | |

9.2. Other information

| | |
|------------------|------------------------|
| Softening point | - |
| Molecular weight | - |
| VOC Content (%) | Not applicable |
| Density | - |
| Bulk density | 156 lb/ft ³ |

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not applicable

10.2. Chemical stability

Stable under normal conditions.

Explosion data

| | |
|----------------------------------|-------|
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |

10.3. Possibility of hazardous reactions**Hazardous polymerisation**

Hazardous polymerisation does not occur.

Possibility of Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid

Dust formation and dust accumulation.

10.5. Incompatible materials

Halogens.

10.6. Hazardous decomposition products

Not applicable.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Product Information**

| | |
|-------------------|-----------------------------------|
| Inhalation | May cause respiratory irritation. |
|-------------------|-----------------------------------|

Eye contact Causes serious eye irritation.
Skin Contact Causes skin irritation.
Ingestion Product not classified.

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------------|-----------|-------------|-----------------|
| Ditungsten Zirconium Octaoxide | - | - | - |

Information on toxicological effects

Symptoms May cause skin, eye, and respiratory tract irritation.

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

Acute toxicity Product not classified.
Skin corrosion/irritation Causes skin irritation.
Serious eye damage/eye irritation Causes serious eye irritation.
Sensitisation Product not classified.
Germ cell mutagenicity Product not classified.
Carcinogenicity Product not classified.
Reproductive toxicity Product not classified.
STOT - single exposure May cause respiratory irritation.
STOT - repeated exposure Product not classified.
Aspiration hazard Product not classified.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

This product as shipped is not classified for aquatic toxicity

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|--------------------------------|----------------------|------|----------------------------|-----------|
| Ditungsten Zirconium Octaoxide | - | - | - | - |

12.2. Persistence and degradability

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12.3. Bioaccumulative potential

.

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

The PBT and vPvB criteria do not apply to inorganic substances.

12.6. Other adverse effects

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| | |
|--|---|
| Waste from residues/unused products | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| Contaminated packaging | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

Section 14: TRANSPORT INFORMATION

IMDG

| | |
|--|----------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing Group | Not regulated |
| 14.5 Marine pollutant | Not applicable |
| 14.6 Special Provisions | None |
| 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code | Not applicable |

RID

| | |
|----------------------------------|----------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing Group | Not regulated |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special Provisions | None |

ADR

| | |
|----------------------------------|----------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing Group | Not regulated |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special Provisions | None |

ICAO (air)

| | |
|----------------------------------|----------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing Group | Not applicable |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special Provisions | None |

IATA

| | |
|----------------------------------|----------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing Group | Not regulated |
| Description | Not applicable |
| 14.5 Environmental hazard | Not applicable |
| 14.6 Special Provisions | None |

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

| Chemical Name | French RG number | Title |
|--|------------------|-------|
| Ditungsten Zirconium Octaoxide 16853-74-0 | - | - |

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

International Inventories

| | |
|---------------|------------|
| DSL/NDSL | Complies |
| EINECS/ELINCS | Not Listed |
| ENCS | Not Listed |
| IECSC | Not Listed |
| KECL | Complies |
| PICCS | Not Listed |
| AICS | Not Listed |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No chemical safety assessment has been performed for this product.

Section 16: OTHER INFORMATION

| | |
|---------------|-----------------------------|
| Issue Date | 01-Apr-2020 |
| Revision Date | 01-Apr-2020 |
| Revision Note | Updated to comply with GHS. |

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Note:

The information provided in this Material 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.

Safety Data Sheets available at ATImetals.com

End of Safety Data Sheet

Additional information available from: Safety data sheets and labels available at ATImetals.com