

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA
GHS

Printing date: 25.03.2016

Revision: 25.03.2016

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Trade name: **Alumina Titania**

Product code: 9319, 9320, 9321, 9323, 1342, 9324, 9375, 9386, 9387, 9388, 9389, 7005, 7006, 7012, #106, #107, #108, #109, #110, #112, #117, #119

1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.

Application of the substance / the mixture: Thermal Spray Powder

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:

Saint Gobain Coating Solutions

One New Bond Street

Worcester, MA 01615-0137

(508) 795-5000

CeramicMaterials@saint-gobain.com

1.4 Emergency telephone number:

CHEMTREC

1-800-424-9300 (US/Canada) +01 703-527-3887 (International)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The product is not classified as hazardous according to the CLP regulation.

Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is not classified as hazardous according to the CLP regulation.

The product is classified and labelled according to the Globally Harmonized System within the United States.

Hazard pictograms

Not applicable within the EU; applicable only for North America.



GHS08

Signal word

Not applicable within the EU; applicable only for North America.

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Warning

- **Hazard-determining components of labelling:**

titanium dioxide

- **Hazard statements**

Not applicable within the EU; applicable only for North America.

H351 Suspected of causing cancer. Route of exposure: Inhalation.

- **Precautionary statements**

Not applicable within the EU; applicable only for North America.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves / eye protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

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

- **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.

- **Results of PBT and vPvB assessment**


- **PBT:** Not applicable.

- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Components:**

CAS: 1344-28-1	aluminium oxide	40-60%
EINECS: 215-691-6	substance with a Community workplace exposure limit	
CAS: 13463-67-7	titanium dioxide	25-40%
EINECS: 236-675-5	 Carc. 2, H351	

- **Additional information:**

For the listed ingredient(s), the identity and/or exact percentages are being withheld as a trade secret.

For the wording of the listed Hazard Statements refer to section 16.

The carcinogen classification is based on the IARC classification and not the CLP classification.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Brush off loose particles from skin.

Immediately rinse with water.

If skin irritation is experienced, consult a doctor.

- **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

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- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Coughing
May cause gastro-intestinal irritation if ingested.
- **Hazards:** Danger of impaired breathing.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
The product is not flammable.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Do not breathe dust.
Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.
- **6.2 Environmental precautions** Avoid release to the environment.
- **6.3 Methods and material for containment and cleaning up**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Use only in well ventilated areas.
Prevent formation of dust.
Any unavoidable deposit of dust must be regularly removed.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Store in dry conditions.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

1344-28-1 aluminium oxide

PEL (USA) Long-term value: 15*; 5** mg/m³
*Total dust; ** Respirable fraction

REL (USA) Long-term value: 10* 5** mg/m³
as Al*Total dust**Respirable/pyro powd./welding f.

TLV (USA) Long-term value: 1* mg/m³
as Al; *as respirable fraction

13463-67-7 titanium dioxide

PEL (USA) Long-term value: 15* mg/m³
*total dust

REL (USA) See Pocket Guide App. A

TLV (USA) Long-term value: 10 mg/m³
withdrawn from NIC

- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid breathing dust.

Avoid close or long term contact with the skin.

Avoid contact with the eyes.

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- **Respiratory protection:**
For spills, respiratory protection may be advisable.
NIOSH or EU approved dust respirator should be used for operations generating dust.
Particulate mask should filter at least 99% of airborne particles.
- **Protection of hands:**
Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.
- **Eye protection:** Follow relevant national guidelines concerning the use of protective eyewear.
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:** Avoid release to the environment.
- **Risk management measures:** See Section 7 for additional information.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Appearance

Form:	Powder
Colour:	Grey
Odour:	Characteristic
Odour threshold:	Not determined.

pH-value:	Not applicable.
Melting point/Melting range:	1950 °C (3542 °F)
Boiling point/Boiling range:	Not determined.

Flash point:	Not applicable.
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Flammability (solid, gaseous):	Not determined.
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Auto/Self-ignition temperature:	Not determined.
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Decomposition temperature:	Not determined.
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Self-igniting:	Product is not self-igniting.
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Danger of explosion:	Product does not present an explosion hazard.
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Explosion limits	
Lower:	Not determined.
Upper:	Not determined.

Oxidising properties	Not determined.
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Vapour pressure:	Not determined.
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Density:	Not determined.
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.

Solubility in / Miscibility with water:	Insoluble.
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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids and alkali.
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
- **10.4 Conditions to avoid** Moisture.
- **10.5 Incompatible materials** Strong acids
- **10.6 Hazardous decomposition products** Toxic metal compounds

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:** None.
- **Primary irritant effect**
- **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 or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer):**

13463-67-7	titanium dioxide	2B
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- **NTP (National Toxicology Program):**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

- **Probable routes of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

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- **Acute effects (acute toxicity, irritation and corrosivity):** No further relevant information available.
- **Repeated dose toxicity:**
Repeated or long-term inhalation of product dusts may cause pulmonary disease.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:**
Based on IARC classifications and not the CLP classification.
Suspected of causing cancer. Route of exposure: Inhalation.
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Smaller quantities can be disposed of with household waste.
Contact waste processors for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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SECTION 14: Transport information

- | | |
|--|-----------------|
| · 14.1 UN-Number | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.2 UN proper shipping name | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.3 Transport hazard class(es) | |
| · DOT, ADR, IMDG, IATA | |
| · Class | Not Regulated |
| · Label | - |
| · 14.4 Packing group | |
| · DOT, ADR, IMDG, IATA | Not Regulated |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

SECTION 15: Regulatory information

- | |
|--|
| · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture |
| · United States (USA) |
| · SARA |
| · Section 355 (extremely hazardous substances): |
| None of the ingredients are listed. |
| · Section 313 (Specific toxic chemical listings): |
| 1344-28-1 aluminium oxide |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |
| · Proposition 65 (California): |
| · Chemicals known to cause cancer: |
| 13463-67-7 titanium dioxide |
| · Chemicals known to cause reproductive toxicity for females: |
| None of the ingredients are listed. |
| · Chemicals known to cause reproductive toxicity for males: |
| None of the ingredients are listed. |

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- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **Carcinogenic Categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

- **IARC (International Agency for Research on Cancer)**

13463-67-7 titanium dioxide

2B

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7 titanium dioxide

- **Canada**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H351 Suspected of causing cancer. Route of exposure: Inhalation.

- **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

Carc. 2: Carcinogenicity, Hazard Category 2

- **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

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Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN:
978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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