



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Orion™ 60 and Orion™ 85 Acoustical Ceiling Panels</b>
<b>Other means of identification</b>	
<b>SDS number</b>	41263350001
<b>Synonyms</b>	Ceiling Tiles, Wet Formed Mineral Fiber Ceiling Panels/Tiles
<b>Recommended use</b>	Interior use.
<b>Recommended restrictions</b>	Use in accordance with manufacturer's recommendations.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company name</b>	USG Interiors, LLC
<b>Address</b>	550 West Adams Street Chicago, Illinois 60661-3637
<b>Telephone</b>	1-800-874-4968
<b>Website</b>	www.usg.com
<b>Emergency phone number</b>	1-800-507-8899

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>OSHA defined hazards</b>	Not classified.
<b>Label elements</b>	
<b>Hazard symbol</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	None.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Get medical attention/advice if you feel unwell.
<b>Storage</b>	Store as indicated in Section 7.
<b>Disposal</b>	Dispose of in accordance with local, state, and federal regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

## 3. Composition/information on ingredients

### Mixtures

<b>Chemical name</b>	<b>CAS number</b>	<b>%</b>
Slag wool fiber	N/A	> 75
Starch	9005-25-8	< 5
Aluminum hydroxide	21645-51-2	< 2
Calcium carbonate	471-34-1	< 2
Continuous filament glass fiber	65997-17-3	< 2
Calcium sulfate dihydrate (alternative CAS 10101-41-4)	13397-24-5	< 2
Kaolin	1332-58-7	< 1

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas.

Raw materials and/or coatings in this product contain small amounts of titanium dioxide, which has been classified as possibly carcinogenic to humans by the International Agency for Research on Cancer (IARC). However, per IARC "no significant exposure to primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints" (1). See Section 16 for further information.

#### 4. First-aid measures

**Inhalation** Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

**Skin contact** Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.

**Eye contact** Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed** Under normal conditions of intended use, this product is not expected to be a health risk. Dust may irritate throat and respiratory system and cause coughing.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically.

**General information** Ensure that medical personnel are aware of the material(s) involved.

#### 5. Fire-fighting measures

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** Not applicable.

**Specific hazards arising from the chemical** Not a fire hazard.

**Special protective equipment and precautions for firefighters** Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials.

**Specific methods** Cool material exposed to heat with water spray and remove it if no risk is involved.

**General fire hazards** No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** See Section 8 of the SDS for Personal Protective Equipment.

**Methods and materials for containment and cleaning up** No specific clean-up procedure noted. For waste disposal, see Section 13 of the SDS.

**Environmental precautions** Avoid discharge to drains, sewers, and other water systems.

#### 7. Handling and storage

**Precautions for safe handling** Use work methods which minimize dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store away from incompatible materials.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### U.S. - OSHA

Components	Type	Value	Form
Slag wool fiber (CAS N/A)	TWA	5 mg/m <sup>3</sup>	Fiber, respirable (diameter ≤ 3.5 µm and length ≥ 10 µm)
		15 mg/m <sup>3</sup>	Fiber, total

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium carbonate (CAS 471-34-1)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
Kaolin (CAS 1332-58-7)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
Starch (CAS 9005-25-8)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum hydroxide (CAS 21645-51-2)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.
Continuous filament glass fiber (CAS 65997-17-3)	TWA	1 fibers/cm <sup>3</sup>	Respirable fibers (length > 5 µm & aspect ratio ≥ 3:1)
Kaolin (CAS 1332-58-7)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Slag wool fiber (CAS N/A)	TWA	1 fibers/cm <sup>3</sup>	Fiber, respirable (length > 5 µm and aspect ratio ≥ 3:1)
Starch (CAS 9005-25-8)	TWA	10 mg/m <sup>3</sup>	

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium carbonate (CAS 471-34-1)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Total
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Total
Continuous filament glass fiber (CAS 65997-17-3)	TWA	3 fibers/cm <sup>3</sup>	Respirable fibers (≤ 3.5 µm in diameter & ≥ 10 µm in length)
		5 mg/m <sup>3</sup>	Fiber, total
Kaolin (CAS 1332-58-7)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Total
Slag wool fiber (CAS N/A)	TWA	3 fibers/cm <sup>3</sup>	Fiber, respirable (diameter ≤ 3.5 µm and length ≥ 10 µm)
		5 mg/m <sup>3</sup>	Fiber, total
Starch (CAS 9005-25-8)	TWA	5 mg/m <sup>3</sup>	Respirable.
		5 mg/m <sup>3</sup>	

**US. NIOSH: Pocket Guide to Chemical Hazards**

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
		10 mg/m3	Total
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).		
<b>Appropriate engineering controls</b>	Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure. Cut and trim with a utility knife or hand saw to minimize dust levels. If a router is used it must have a dust collection system. Operations such as power cutting, power kerfing or using compressed air to remove dust are not recommended (2). See Section 16 for further information.		
<b>Individual protection measures, such as personal protective equipment</b>			
<b>Eye/face protection</b>	Wear approved safety goggles.		
<b>Skin protection</b>			
<b>Hand protection</b>	It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.		
<b>Other</b>	Normal work clothing (long sleeved shirts and long pants) is recommended.		
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.		
<b>Thermal hazards</b>	None.		
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment separately from regular wash. Observe any medical surveillance requirements.		

**9. Physical and chemical properties**

**Appearance**

<b>Physical state</b>	Solid.
<b>Form</b>	Panel.
<b>Color</b>	White or colored surface; beige/gray core.
<b>Odor</b>	Low to no odor.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	9
<b>Melting point/freezing point</b>	2200 °F (1204.44 °C) (Slag wool)
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	0.20 - 0.24 (H2O=1)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Very low solubility in water.

<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Bulk density</b>	13 - 15 lb/ft <sup>3</sup>
<b>VOC (Weight %)</b>	0 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Inhalation of dusts may cause respiratory irritation.
<b>Skin contact</b>	May cause irritation through mechanical abrasion.
<b>Eye contact</b>	Direct contact with airborne particulates may cause temporary irritation.
<b>Ingestion</b>	This product is not intended nor expected to be ingested or eaten. Ingestion may cause irritation and stomach discomfort.

**Symptoms related to the physical, chemical and toxicological characteristics** Under normal conditions of intended use, this material does not pose a risk to health.

### Information on toxicological effects

**Acute toxicity** Not expected to be a hazard under normal conditions of intended use.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Aluminum hydroxide (CAS 21645-51-2)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not expected to cause respiratory sensitization based on non-skin sensitization history.
<b>Skin sensitization</b>	Not expected to be a skin sensitizer.

**Germ cell mutagenicity** Not expected to be mutagenic.

**Carcinogenicity** This material is not classified as a carcinogen by IARC, ACGIH, NTP or OSHA.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Reproductive toxicity** Not classified.

**Specific target organ toxicity - single exposure** No data available, but none expected.

**Specific target organ toxicity - repeated exposure** No data available, but none expected.

**Aspiration hazard** Due to the physical form of the product it is not an aspiration hazard.

**Chronic effects** No other specific acute or chronic health impact noted.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	Bioaccumulation is not expected.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	None expected.

## 13. Disposal considerations

<b>Disposal instructions</b>	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
<b>Local disposal regulations</b>	Dispose of in accordance with local regulations.
<b>Hazardous waste code</b>	Not regulated.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Dispose of in accordance with local regulations.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### **SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

### **SARA 313 (TRI reporting)**

Not regulated.

### **Other federal regulations**

#### **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

#### **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

## US state regulations

### US. Massachusetts RTK - Substance List

Calcium carbonate (CAS 471-34-1)  
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)  
Kaolin (CAS 1332-58-7)  
Starch (CAS 9005-25-8)

### US. New Jersey Worker and Community Right-to-Know Act

Calcium carbonate (CAS 471-34-1)  
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)  
Kaolin (CAS 1332-58-7)

### US. Pennsylvania Worker and Community Right-to-Know Law

Calcium carbonate (CAS 471-34-1)  
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)  
Kaolin (CAS 1332-58-7)  
Starch (CAS 9005-25-8)

### US. Rhode Island RTK

Not regulated.

### US. California Proposition 65

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date 12-August-2015

Revision date

Version # 01

## Further information

Slag Wool Fiber: Large morbidity and mortality studies of both European and North American mineral wool manufacturing workers have been conducted. These studies have found no significant association of non-malignant (i.e. fibrosis) or malignant (i.e., lung cancer or mesothelioma) lung disease and exposures to slag wool fibers and have not established a causal relationship between exposure and non-malignant or malignant diseases. In 2001, the International Agency for Research on Cancer (IARC) assigned slag wool fiber to the Group 3 category ["not classifiable as to carcinogenicity to humans"]. The synthetic mineral fiber used in this product is exonerated from classification as a carcinogen in accordance with Note Q in the EU Commission Directive 97/69/EC.

Titanium dioxide: Raw materials and/or coatings in this product contain small amounts of titanium dioxide. The International Agency for Research on Cancer (IARC) has determined that titanium dioxide is possibly carcinogenic to humans (Group 2B) based on inadequate evidence in humans and sufficient evidence in experimental animals. This conclusion relates to long-term inhalation exposure to high concentrations of pigmentary (powdered) or ultrafine titanium dioxide. However, no significant exposure to primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints. The available human studies do not suggest an association between occupational exposure to titanium dioxide and risk for cancer (1). The American Conference of Governmental Industrial Hygienists (ACGIH) has designated this chemical as not classifiable as a human carcinogen (A4). The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens.

Continuous filament glass fibers: The International Agency for Research on Cancer (IARC) in June, 1987, categorized continuous filament glass fibers as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human as well as animal studies was evaluated by IARC as insufficient to classify continuous filament glass fiber as a possible, probable, or confirmed cancer causing material. The ACGIH has established a TLV (Threshold Limit Value or recommended exposure limit) for continuous filament glass fiber of 1 fiber per cubic centimeter of air for respirable fibers and 5 mg per cubic meter of air for inhalable glass fiber dust. These levels were established to prevent mechanical irritation of the upper airways. IARC, NTP (US National Toxicology Program) and OSHA (US Occupational Safety and Health Administration) do not list continuous filament glass fibers as a carcinogen. As manufactured, continuous filament glass fibers in this product are not respirable. Continuous filament glass products that are chopped, crushed or severely mechanically processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards.

NFPA Ratings:

Health: 1

Flammability: 0

Physical hazard: 0

NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## NFPA ratings



## References

- 1.) International Agency for Research on Cancer (IARC). Volume 93: Carbon Black, Titanium Dioxide, and Talc; (5. Summary of data reported). IARC, 2010. Available at: <<http://monographs.iarc.fr/ENG/Monographs/vol93/mono93.pdf>>
- 2.) North American Insulation Manufacturer's Association (NAIMA). Working Smart with Fiber Glass, Rock Wool and Slag Wool Products. NAIMA, 2007. Available at: <<http://www.naima.org/publications/N059.PDF>>

## Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.