

# SMART CERAMIC\*

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 06/23/2022

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form Mixture  
Product name SMART CERAMIC\* (630)  
Product code SS-C630CS

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

#### 1.3. Details of the supplier of the safety data sheet

Smart Solutions  
12 Corporate Plaza  
Suite 150  
Newport Beach, CA 92660 - USA  
T (949) 431-2732  
[www.smartsolutions.net](http://www.smartsolutions.net)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. Label elements

##### GHS US labeling

Precautionary statements (GHS US)

#### 2.3. Other hazards

#### 2.4. Unknown acute toxicity (GHS US)

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
butyl glycoether	(CAS-No.) 111-76-2	5 – 10	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2B, H320
Glycidyoxypropyl trimethoxysilane	(CAS-No.) 2530-83-8	0.1 – 3	Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

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

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Glycidyloxypropyl trimethoxysilane (2530-83-8)		
Not applicable		
butyl glycolether (111-76-2)		
ACGIH	ACGIH OEL TWA [ppm]	20 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) [1]	240 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) [2]	50 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing.

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Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental exposure controls	: Avoid release to the environment.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
	: No data available
	: No data available
Odor threshold	: No data available
pH	: $\approx 3.5$
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: $> 212^{\circ}\text{F}$
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at $20^{\circ}\text{C}$	: No data available
Relative density	: No data available
Density	: 8.25 lb/gal
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 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	: Not classified
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#### Glycidyloxypropyl trimethoxysilane (2530-83-8)

LD50 oral rat	8025 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Experimental value)
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<b>Glycidyoxypropyl trimethoxysilane (2530-83-8)</b>	
LD50 dermal rabbit	4250 mg/kg body weight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
ATE US (oral)	8025 mg/kg body weight
ATE US (dermal)	4250 mg/kg body weight

<b>butyl glycolether (111-76-2)</b>	
LD50 oral rat	1746 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
LD50 dermal rabbit	435 mg/kg body weight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity; 435 mg/kg bodyweight; Rabbit; Weight of evidence; Equivalent or similar to OECD 402)
LC50 Inhalation - Rat	> 4.26 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	1746 mg/kg body weight
ATE US (dermal)	435 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Not classified pH: ≈ 3.5
Serious eye damage/irritation	: Not classified pH: ≈ 3.5
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

<b>butyl glycolether (111-76-2)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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<b>Glycidyoxypropyl trimethoxysilane (2530-83-8)</b>	
LC50 - Fish [1]	55 mg/l (LC50; EU Method C.1; 96 h; Cyprinus carpio; Semi-static system; Fresh water; Experimental value)
EC50 - Crustacea [1]	< 250 mg/l (NOEC; US EPA; 48 h; Simocephalus vetulus; Static system; Fresh water; Experimental value)
LC50 - Fish [2]	237 mg/l (LC50; 96 h; Salmo gairdneri; Static system)
EC50 - Crustacea [2]	324 mg/l (LC50; US EPA; 48 h; Simocephalus vetulus; Static system; Fresh water; Experimental value)
Threshold limit - Algae [1]	119 mg/l (EC50; US EPA; 7 days; Anabaena flosaquae; Static system; Fresh water; Experimental value)
Threshold limit - Algae [2]	250 mg/l (EbC50; 72 h; Selenastrum capricornutum)

<b>butyl glycolether (111-76-2)</b>	
LC50 - Fish [1]	1474 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	1550 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	911 mg/l (72 Hr.)

### 12.2. Persistence and degradability

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### Glycidyoxypropyl trimethoxysilane (2530-83-8)

Persistence and degradability	Not readily biodegradable in water. Hydrolysis in water. No (test)data on mobility of the substance available.
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### butyl glycolether (111-76-2)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.71 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.2 g O <sub>2</sub> /g substance
ThOD	2.305 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.31

## 12.3. Bioaccumulative potential

### Glycidyoxypropyl trimethoxysilane (2530-83-8)

Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

### butyl glycolether (111-76-2)

Partition coefficient n-octanol/water (Log Pow)	0.81 (Experimental value; BASF test; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

## 12.4. Mobility in soil

### butyl glycolether (111-76-2)

Surface tension	0.027 N/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.451 – 0.882 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

## 12.5. Other adverse effects

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

### Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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<b>Acetic acid (64-19-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb
<b>Glycidyloxypropyl trimethoxysilane (2530-83-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.
<b>Cocamidopropyl bentaine (61789-40-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Sodium chloride (7647-14-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Glycerol (56-81-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>butyl glycolether (111-76-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	1 %
<b>ethylene glycol (107-21-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 313 - Emission Reporting	1 %
<b>Acid Yellow 36 (587-98-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Isopropyl alcohol (67-63-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 %
<b>Quaternary Ammonium Compounds (Not Available)</b>	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Benzyl acetate (140-11-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>CITRAL (5392-40-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Benzyl Salicylate (118-58-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2. International regulations

<b>SMART CERAMIC</b>	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>ethylene glycol (107-21-1)</b>	
Listed on EPA Hazardous Air Pollutant (HAPS)	
<b>Polysorbate 20</b>	
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)	

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### Quaternary Ammonium Compounds (Not Available)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

### 15.3. US State regulations

#### ethylene glycol (107-21-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

#### Acetic acid (64-19-7)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### Glycerol (56-81-5)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### butyl glycolether (111-76-2)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### ethylene glycol (107-21-1)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### Isopropyl alcohol (67-63-0)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List

#### Benzyl acetate (140-11-4)

U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Flam. Liq. 4	Flammable liquids Category 4
Skin Irrit. 2	Skin corrosion/irritation Category 2

SDS US (GHS HazCom 2012) - Custom

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