

SMART CERAMIC* 630

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

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

Glycidyoxypropyl 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 ³
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	: ≈ 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°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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Glycidyloxypropyl trimethoxysilane (2530-83-8)	
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

butyl glycolether (111-76-2)	
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

butyl glycolether (111-76-2)	
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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Glycidyloxypropyl trimethoxysilane (2530-83-8)	
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)

butyl glycolether (111-76-2)	
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 ₂ /g substance
Chemical oxygen demand (COD)	2.2 g O ₂ /g substance
ThOD	2.305 g O ₂ /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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Acetic acid (64-19-7)	
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
Glycidyloxypropyl trimethoxysilane (2530-83-8)	
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.
Cocamidopropyl bentaine (61789-40-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium chloride (7647-14-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Glycerol (56-81-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
butyl glycolether (111-76-2)	
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 %
ethylene glycol (107-21-1)	
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 %
Acid Yellow 36 (587-98-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Isopropyl alcohol (67-63-0)	
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 %
Quaternary Ammonium Compounds (Not Available)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
Benzyl acetate (140-11-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CITRAL (5392-40-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Benzyl Salicylate (118-58-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

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Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
ethylene glycol (107-21-1)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
Polysorbate 20	
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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