

Section 1: IDENTIFICATION

Product Name: SmartSeramic 1
Product ID #: SS-C600LP (600)
Product Use: Low pH Ceramic
Restrictions on Use: Not available.
Manufacturer/Supplier: Smart Solutions Inc.
 12 Corporate Plaza Dr. Suite 150
 Newport Beach, CA 92660
Phone Number: Emergency +1 (949) 722-4500
Phone: Chemtrec (US & Canada) 1-800-424-9300
 Chemtrec (outside the US & Canada) 1-703-537-3887
Date of Preparation of SDS: October 7, 2020

Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification: Corrosive to Metals, Category 1
 Eye Irritation, Category 2A

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word: Danger

Hazard Statements: May be corrosive to metals.
 Causes serious eye irritation.

Precautionary Statements

Prevention: Keep only in original packaging.
 Wash hands thoroughly after handling.
 Wear protective gloves, protective clothing and eye protection.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical attention.
 Absorb spillage to prevent material damage.

Storage: Store in corrosive resistant container with a resistant inner liner.

Disposal: Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 5% of this product mixture consists of ingredient(s) of unknown acute toxicity.



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This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Hydrochloric acid	Not available.	7647-01-0	7 - 13
Ethanol, 2-amino-	Ethanolamine	141-43-5	5 - 10
Proprietary	Not available.	Proprietary	1 - 5

The specific chemical identity of some of the ingredients and/or concentration have been withheld as a trade secret.

Section 4: FIRST-AID MEASURES

- Inhalation:** If inhaled: Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
- Eye Contact:** If in eyes: Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
- Skin Contact:** If on skin: Wash with plenty of water. Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
- Ingestion:** If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



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Fire involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is not sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO₂ or water spray.

Large Fire: Dry chemical, CO₂, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: Oxides of carbon. Oxides of nitrogen.

Protection of Firefighters: Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate enclosed areas.

Personal Precautions: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in Section 8.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk.

Methods for Clean-Up: Absorb spillage to prevent material damage. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:

Do not swallow. Keep only in original packaging. Wash hands thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

Storage:

Store in corrosive resistant container with a resistant inner liner. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component

Hydrochloric acid [CAS No. 7647-01-0]

ACGIH: 2 ppm (C); A4 (2000)

OSHA: 5 ppm (C), 7 mg/m³ (C);

Ethanolamine [CAS No. 141-43-5]

ACGIH: 3 ppm (TWA); 6 ppm (STEL); (1985)

OSHA: 3 ppm (TWA), 6 mg/m³ (TWA);
6 ppm (STEL) [Vacated];

Proprietary [CAS No. Proprietary]

ACGIH: No TLV established.

OSHA: No PEL established.

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

C: Ceiling

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection:

Wear chemical safety goggles. Ensure that eyewash stations and safety showers are close to the workstation location. Use equipment for eye protection that meets the standards referenced by OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

Hand Protection:

Wear protective gloves. Consult manufacturer specifications for further information.

Skin and Body Protection:

Wear protective clothing.

Respiratory Protection: If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid.
Colour:	Yellow.
Odour:	Characteristic.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	-0.33
Melting Point / Freezing Point:	< 0 °C (32 °F)
Initial Boiling Point:	> 100 °C (212 °F)
Boiling Range:	> 100 °C (212 °F)
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	1.080 (Water = 1) at 20 °C (68 °F)
Solubilities:	Completely miscible in water.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Percent Volatile, wt. %:	Not available.



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VOC content, wt. %: Not available.

Density: 1.078 g/cm³ at 20 °C (68 °F)

Coefficient of Water/Oil Distribution: Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Chemical Stability: Stable under normal storage conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: Contact with incompatible materials. Sources of ignition. Exposure to heat.

Incompatible Materials: Bases. Oxidizers. Soft metals (aluminum, magnesium, etc.).

Hazardous Decomposition Products: Chlorine. Hydrogen.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral: Not available.

Dermal: Not available.

Inhalation: Not available.

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Hydrochloric acid	7647-01-0	900 mg/kg (rabbit)	Not available.	1108 ppm (mouse); 1H
Ethanolamine	141-43-5	620 mg/kg (guinea pig)	1 mL/kg (rabbit)	Not available.
Proprietary	Proprietary	Not available.	Not available.	Not available.

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Liver. Kidneys. Central nervous system. Teeth.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Eye: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.



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Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Liver. Kidneys. Central nervous system. Teeth.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. Prolonged exposure to Hydrochloric acid may cause conjunctivitis, photosensitization, and possible blindness, and may have effects on the lungs, resulting in chronic bronchitis.

Carcinogenicity: Product is not classified as a carcinogen. See Component Carcinogenicity table below for information on individual components.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Hydrochloric acid	A4	Group 3	Not listed.	Not listed.	Not listed.

Mutagenicity: Not available.

Reproductive Effects: Not available.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not regulated as per exemption 49CFR 173.154 (d) (2).

Class: Not applicable.

UN Number: Not applicable.

Packing Group: Not applicable.

Label Code: Not applicable.

ICAO/IATA

Proper Shipping Name: UN1760, CORROSIVE LIQUIDS, N.O.S. (Hydrochloric acid), 8, PG III

Class: 8

UN Number: UN1760

Packing Group: III

Label Code:



IMDG

Proper Shipping Name: UN1760, CORROSIVE LIQUIDS, N.O.S. (Hydrochloric acid), 8, PG III

Class: 8

UN Number: UN1760

Packing Group: III

Label Code:



Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.

Federal Regulations

United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.



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SARA Title III

Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Hydrochloric acid	500	5000	5000	313	Not listed.	5000

State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Hydrochloric acid	7647-01-0	E
Ethanolamine	141-43-5	Listed.

Note: E = Extraordinarily Hazardous Substance

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Hydrochloric acid	7647-01-0	SHHS
Ethanolamine	141-43-5	SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Hydrochloric acid	7647-01-0	E
Ethanolamine	141-43-5	Listed.

Note: E = Environmental Hazard

California

California Prop 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: October 7, 2020

Version: 1.0

GHS SDS Prepared by: Smart Solutions Inc.

Phone: (949) 722-4500