

SECTION 1. IDENTIFICATION

GHS product identifier	CeraSurf RTV-HS
Chemical name	Not available
Other means of identification	Not available
Product Type	Solid
Supplier's details	CoorsTek, Inc. 14143 Denver West Pkwy Suite 400 Golden, CO 80401 Phone: +1 303 271 7100 Fax: +1 303 271 7009
Emergency telephone number (with hours of operation)	+1 303 271 7100 8am-5pm MDT (M-F)

SECTION 2. HAZARDS IDENTIFICATION

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS LABEL ELEMENTS
Hazard pictograms


Signal word Danger

Hazard statements H314 - Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENTS

Prevention P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P264 - Wash hands thoroughly after handling.

SECTION 2. HAZARDS IDENTIFICATION, CONTINUED

Response P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
 P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
 P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage P405 - Store locked up.

Disposal P501 - Dispose of contents and container in accordance with all local, regional, national, and international regulations.

Hazards not otherwise classified None known

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Other means of identification Not available

CAS NUMBER/OTHER IDENTIFIERS

CAS number Not applicable

Product code Not available

INGREDIENT NAME	%	CAS NUMBER
Siloxanes and Silicones, di-Me, hydroxy-terminated	60 - 100	70131-67-8
Silicon dioxide	10 - 30	7631-86-9
Distillates (petroleum), hydrotreated middle	5 - 10	64742-46-7
Triacetoxyethylsilane	1 - 5	17689-77-9
Methylsilanetriyl triacetate	1 - 5	4253-34-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

DESCRIPTION OF NECESSARY FIRST AID MEASURES

- Eye contact** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.
- Inhalation** If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
- Skin contact** If irritation does occur flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
- Ingestion** If irritation or discomfort occurs, obtain medical advice.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

Potential acute health effects

- Eye contact** Causes serious eye damage
- Inhalation** May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentration is attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion, or loss of coordination.
- Skin contact** Causes severe burns
- Ingestion** May cause burns to mouth, throat, and stomach. Low ingestion hazard in normal use.

Over-exposure signs/symptoms

- Eye contact** Adverse symptoms may include the following: pain, watering, redness
- Inhalation** No known significant effects or critical hazards
- Skin contact** Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
- Ingestion** Adverse symptoms may include the following: stomach pains
Overexposure by ingestion may injure the following organ(s): nervous system, digestive system.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY

- Notes to physician** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** No specific treatment
- Protection of first-aiders** No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

SECTION 5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable extinguishing media	On large fires use dry chemical, foam, or water spray. On small fires use carbon dioxide (CO ₂), dry chemical, or water spray. Water can be used to cool fire exposed containers.
Unsuitable extinguishing media	None known
Specific hazards arising from the chemical	No specific fire or explosion hazard
Hazardous thermal decomposition products	Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.
Special protective actions for fire-fighters	No special measures are required.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in “For non-emergency personnel”.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

METHODS & MATERIALS FOR CONTAINMENT AND CLEANING UP

Spill	Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents, or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.
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SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Protective measures Use with adequate ventilation. Product evolves acetic acid (HOAc) when exposed to water or humid air. Provide ventilation during use to control HOAc within exposure guidelines or use respiratory protection. Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust, or fumes. Keep container closed. Do not take internally.

Advice on general occupational hygiene Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities Use reasonable care and store away from oxidizing materials. Keep container closed and store away from water or moisture. This material in its finely divided form presents an explosion hazard. Follow NFPA 654 (for chemical dusts) or 484 (for metal dusts) as appropriate for managing dust hazards to minimize secondary explosion potential.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

Occupational exposure limits None

Appropriate engineering controls Acetic acid is formed upon contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 10 ppm and ACGIH TLV: TWA 10 ppm, STEL 15 ppm.
Local ventilation: recommended
General ventilation: recommended

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure compliance with the requirements of environmental protection legislation.

INDIVIDUAL PROTECTION MEASURES

Hygiene measures Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory, and at the end of the working period. Follow good industrial hygiene practice.

Eye/face protection Use proper protection – safety glasses as a minimum.

SKIN PROTECTION

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection Not required under normal conditions of use

Other skin protection Not required under normal conditions of use

RESPIRATORY PROTECTION Respiratory protection is not needed under ambient conditions. If vapor is generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE**

Physical state	Solid [paste]
Color	White
Odor	Acetic acid
Odor threshold	Not applicable
pH	Not applicable
Melting point	Not available
Boiling point	Not available
Flash point	Closed cup: >100°C (>212°F)
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available
Lower and upper explosive (flammable) limits	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	1.04
Solubility	Insoluble in the following materials: cold water and hot water
Partition coefficient: n- octanol/water	Not applicable
Auto-ignition temperature	Not flammable
Decomposition temperature	Not available
Viscosity	Not applicable
Volatility	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity is available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	None known
Incompatible materials	Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form.
Hazardous decomposition products	Carbon oxides, silicon dioxide, formaldehyde, metal oxides, nitrogen oxides, chlorine compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity	PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
	Methylsilanetriyl triacetate	LD50 Oral	Rat	2060 mg/kg	-

Irritation/Corrosion There is no data available.

Sensitization There is no data available.

Carcinogenicity	NAME	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
	Silicon dioxide	-	3	-	-	-	-

Reproductive toxicity There is no data available.

Specific target organ toxicity (single exposure) There is no data available.

Specific target organ toxicity (repeated exposure) There is no data available.

Aspiration hazard There is no data available.

Information on the likely routes of exposure Routes of entry anticipated: inhalation

POTENTIAL ACUTE HEALTH EFFECTS

Eye contact Causes serious eye damage.

Inhalation May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Material is not likely to present an inhalation hazard at ambient conditions. However, if material is heated or high vapor concentration is attained, central nervous system depression may occur, which is characterized by drowsiness, dizziness, confusion or loss of coordination.

Skin contact Causes severe burns

Ingestion May cause burns to mouth, throat, and stomach. Low ingestion hazard in normal use.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

Eye contact Adverse symptoms may include the following: pain, watering, redness

Inhalation No known significant effects or critical hazards

Skin contact Adverse symptoms may include the following: pain or irritation, redness, blistering may occur

Ingestion Adverse symptoms may include the following: stomach pains
Overexposure by ingestion may injure the following organ(s): nervous system, digestive system

SECTION 11. TOXICOLOGICAL INFORMATION, CONTINUED

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE

Short term exposure

Potential immediate effects No known significant effects or critical hazards

Potential delayed effects No known significant effects or critical hazards

Long term exposure

Potential immediate effects No known significant effects or critical hazards

Potential delayed effects No known significant effects or critical hazards

POTENTIAL CHRONIC HEALTH EFFECTS

General No known significant effects or critical hazards

Carcinogenicity No known significant effects or critical hazards

Mutagenicity No known significant effects or critical hazards

Teratogenicity No known significant effects or critical hazards

Developmental effects No known significant effects or critical hazards

Fertility effects No known significant effects or critical hazards

NUMERICAL MEASURE OF TOXICITY

Acute toxicity estimates

ROUTE	ATE VALUE
Oral	6000 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Toxicity There is no data available.

Persistence and degradability There is no data available.

Bioaccumulative potential There is no data available.

MOBILITY IN SOIL

Soil/water partition coefficient (K_{oc}) Not available

Other adverse effects No known significant effects or critical hazards

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

SECTION 14. TRANSPORT INFORMATION

	DOT	IMDG	IATA
UN Number	Not regulated	Not regulated	Not regulated
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	-	-	-
Additional information	-	-	-

AERG: not applicable

Special precautions for user Transport within users' premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL t73/78 and the IBC Code Not available

SECTION 15. REGULATORY INFORMATION

U.S. Federal regulations TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, hydroxy-terminated
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed

CLEAN AIR ACT SECTION 602

Class I Substances Not listed

Class II Substances Not listed

DEA List I Chemicals (Precursor Chemicals) Not listed

DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304 No products were found.

SARA 304 RQ Not applicable

SARA 311/312 Immediate (acute) health hazard

NAME	%	FIRE HAZARD	SUDDEN RELEASE OF PRESSURE	REACTIVE	IMMEDIATE (ACUTE) HEALTH HAZARD	DELAYED (CHRONIC) HEALTH HAZARD
Methylsilanetriyl triacetate	1 - 5	No	No	No	Yes	No
Triacetoxy-ethylsilane	1 - 5	No	No	No	Yes	No

SARA 313 No products were found.

REGULATIONS

Massachusetts The following components are listed: silicon dioxide

New York None of the components are listed.

New Jersey None of the components are listed.

Pennsylvania The following components are listed: silicon dioxide

California Prop. 65 No products were found.

SECTION 16. OTHER INFORMATION

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Prepared by KMK Regulatory Services Inc.

Key to abbreviations ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = Logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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