

CERAMCO

MATERIAL SAFETY DATA SHEET

Issued on July 2, 1997

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: **Colorlogic Silane Agent - Activator**
PRODUCT CODE: 613700, 613747
MANUFACTURER/SUPPLIER: Ceramco
 Six Terri Lane
 Burlington, NJ 08016
 USA
 Phone number: (800) 487-0100

Ceramco Europe Ltd.
 Hamm Moor Lane, Addlestone
 Weybridge, Surrey
 KT15 2SE England
 Phone number: 0-1932-856240

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

DESCRIPTION: Alcohol-based liquid.

HAZARDOUS INGREDIENTS:

<u>Component</u>	<u>CAS No</u>	<u>Weight %</u>	<u>OSHA/PEL or TWA</u>	<u>ACGIH/TLV or TWA</u>	<u>HAZARDS</u>
Ethanol	64-17-5	90	1000 ppm	1000 ppm	Flammable
Acetic Acid	64-19-7	10	10 ppm	10 ppm	Irritant

SECTION III - HAZARDS IDENTIFICATION

NFPA HAZARD DESIGNATIONS: Health: 0 (Minimal)
 Flammability: 3 (Serious)
 Reactivity: 0 (Minimal)

IMPORTANT HAZARD INFORMATION: Flammable vapor and liquid. Harmful if swallowed or inhaled. Possible aspiration hazard if swallowed. May be irritating to the skin, eyes, and respiratory tract.

SECTION IV - FIRST-AID MEASURES

GENERAL INFORMATION: Consult doctor in case of symptoms.
AFTER INHALATION: Supply fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult doctor in case of symptoms.
AFTER SKIN CONTACT: Immediately wash skin with copious amounts of water. Remove any contaminated clothing. Wash skin thoroughly with soap and water. Consult doctor in case of symptoms.
AFTER EYE CONTACT: Rinse opened eye for 15 minutes under running water. Consult doctor in case of symptoms.
AFTER SWALLOWING: If victim is conscious, give 1-3 glasses of water and induce vomiting. **DO NOT MAKE AN UNCONSCIOUS PERSON VOMIT.** Consult doctor immediately.

SECTION V - FIRE-FIGHTING MEASURES

FIRE EXTINGUISHING AGENTS: Use alcohol foam, dry chemical, all-purpose AFFF, or carbon dioxide. Water may be ineffective but should be used to cool fire-exposed containers. Water spray should be used to disperse vapors.
SPECIAL PROTECTIVE EQUIPMENT: Wear self-contained breathing apparatus with full face-piece in positive pressure mode and full protective clothing.

SECTION VI - ACCIDENTAL RELEASE MEASURES

PERSON-RELATED SAFETY PRECAUTIONS: Avoid skin and eye contact. Provide adequate ventilation.
ENVIRONMENTAL PROTECTION: Do not allow to enter drainage system, surface or ground water.
MEASURES FOR CLEANING/COLLECTING: Take up with sand or other non-combustible absorbent material and place

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into container for later disposal.

ADDITIONAL INFORMATION:

No additional information.

SECTION VII - HANDLING AND STORAGE

INFORMATION FOR SAFE HANDLING: Ensure good ventilation/exhaustion at workplace. Keep container closed when not in use. Ground lines and equipment used during transfer to reduce possibility of static spark-initiated fire or explosion.

PROTECTION AGAINST EXPLOSIONS/FIRES: Store away from ignition sources. Protect from heat, sparks, and flame.

STORAGE: Store in cool location.

COMMON STORAGE FACILITIES: Avoid storage near oxidizers.

SECTION VIII - EXPOSURE CONTROLS/ PERSONAL PROTECTION

VENTILATION: Use general or local exhaust to meet ventilation requirements.

EYE PROTECTION: Safety glasses are recommended. An eye bath and washing facilities should be available.

SKIN PROTECTION: Butyl rubber, Viton, 4H, and Teflon gloves are recommended.

RESPIRATORY PROTECTION: If TLV is exceeded, a full-face respirator with self contained breathing apparatus (SCBA) is recommended.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

FORM: Fluid

COLOR: Colorless

ODOR: Vinegar-like

pH: 2-3

MELTING POINT: Not Available

BOILING POINT: 78°C

FLASH POINT: 13°C

VAPOR DENSITY: 1.6 (Air = 1.0)

AUTOIGNITION TEMPERATURE: 363°C

DANGER OF EXPLOSION: Product is explosive when exposed to heat and flame.

FLAMMABILITY: Product is flammable.

VAPOR PRESSURE: 43 mm @ 20°C

DENSITY: 0.84 gm/cc @ 20°C

SOLUBILITY/ MISCIBILITY: Soluble in water (all proportions)

SECTION X - STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Heat, sparks, open flames.

MATERIALS TO AVOID: Oxidizing materials, strong acids, and bases.

DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

SECTION XI - TOXICOLOGICAL INFORMATION

EFFECTS OF OVEREXPOSURE:

SKIN CONTACT: Repeated or prolonged contact may cause skin irritation, redness, cracking, or secondary infection.

EYE CONTACT: Exposure to liquid, vapors, fumes, or mists may cause irritation. Direct

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INHALATION: contact may cause irritation, pain, corneal inflammation or damage.
INGESTION: May cause irritation of respiratory tract or mucous membranes.
SENSITIZATION: May cause severely harmful central nervous system effects. Aspiration
into lungs may cause pneumonitis.
CHRONIC EFFECTS: No sensitizing effect known.
May cause degenerative changes in liver, kidneys, brain, gastrointestinal
tract, heart muscle and reproductive effects.
CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing liver impairment, skin and respiratory disorders.

SECTION XII - ECOLOGICAL INFORMATION

Do not allow product to reach ground water, water bodies, or sewage system.

SECTION XIII - DISPOSAL CONSIDERATION

PRODUCT DISPOSAL: Do not dispose with household waste. Dispose according to official
regulations for relatively non-toxic organics.
CONTAMINATED PACKAGING: Dispose according to official regulations.
ADDITIONAL DISPOSAL INFORMATION: Local disposal regulations may exist.

SECTION XIV - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Ethanol solution
HAZARD CLASS: 3
PACKAGING GROUP: II
DOT CLASSIFICATION: Flammable liquid
UN/NA: UN 1170 (Ethanol)

SECTION XV - REGULATORY INFORMATION

US:

SARA/TITLE III HAZARD CATEGORIES AND LISTS

ACUTE: Yes CHRONIC: Yes FLAMMABILITY: Yes PRESSURE: No REACTIVITY: No
EXTREMELY HAZARDOUS SUBSTANCE: no
CERCLA HAZARDOUS SUBSTANCE: no
SARA 313 TOXIC CHEMICALS: no
TSCA INVENTORY: yes

CANADA:

DSL: Ethanol is listed on the Domestic Substances list.
WHMIS: 10% Acetic acid is listed as a Poisonous and Infectious material.

SECTION XVI - OTHER INFORMATION

INTERNATIONAL RISK PHRASES: 10, 16, 22, 36, 37, 38.
INTERNATIONAL SAFETY PHRASES: 2, 3, 9, 14, 20, 21, 24, 25, 36, 37, 39, 51.

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.