SAFETY DATA SHEET
SUPER SEAL HVACR, ACR

Revision Date: April 21, 2015 **Version:** 2.1
Supersedes: April 4, 2011

Section 1 – Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: SUPER SEAL HVACR™; SUPER SEAL ACR™
Part Numbers: 944KIT, 947KIT
Product Class: HVAC and refrigeration additive
Manufacturer: Cliplight Manufacturing
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Section 2 – Hazards Identification

GHS Classification

Flammable liquids: Category 3
Serious eye damage/eye irritation: Category 1
Skin Sensitization: Category 1
Hazardous to the aquatic environment: Chronic 3

Label elements:

Danger

Hazard statements:
H226 Flammable liquid and vapour
H318 Causes serious eye damage
H317 May cause an allergic skin reaction
H412 Harmful to aquatic life with long lasting effects

Precautionary statements:
P280 Wear protective gloves and eye protection.
P261 Avoid breathing mist, vapour or spray.
P273 Avoid release to the environment.
P302 + P352 IF ON SKIN: Wash with soap and plenty of water.
P333 + P313: If skin irritation or rash occurs: Get medical attention.
P363 Wash contaminated clothing before reuse.
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 seek medical attention.
P501 Dispose of contents and container in accordance with local, state and national regulations.

Other hazards:
None known.

Section 3 – Composition/Information on Ingredients

Ingredient Name	CAS No.	EC No.	Composition, wt%
Trimethoxyvinylsilane	2768-02-7	220-449-8	10-20
N-(3-(trimethoxysilyl)propyl) ethylenediamine	1760-24-3	217-164-6	5-10
Trimethoxy(methyl)silane	1185-55-3	214-685-0	1-5

Remaining components of these products are not classified as hazardous under the GHS, 29 CFR 1910.1200, WHMIS 2015, or (EC) No 1272/2008.

Section 4 – First-Aid Measures

Inhalation
Remove person to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

Eye Contact
Remove contact lenses and immediately flush eyes with copious amounts of water for at least 15 minutes. Obtain medical attention.

Skin Contact
Immediately wash skin with soap and plenty of water. If irritation persists or if contact has been prolonged, obtain medical attention. Wash contaminated clothing before reuse.

Ingestion
Do NOT induce vomiting. Wash out mouth with water provided person is conscious. Call a physician.

Acute and Delayed Symptoms
This product is expected to react with moisture in the gastrointestinal tract to form methanol. Symptoms may be delayed and include headache, dizziness, nausea, lack of coordination and confusion.

Special Treatment Needed
Get medical treatment immediately.

Section 5 – Fire-Fighting Measures

Extinguishing media
DO NOT USE WATER STREAM. Use carbon dioxide, dry chemical powder, alcohol-resistant foam or water spray.

Special hazards arising from the substance or mixture
Burning in a fire produces carbon oxides, silicon oxides, smoke and fumes.

Advice for firefighters
Self-contained breathing apparatus and protective clothing if required.
Vapours may travel considerable distance to a source of ignition and flash back.

Section 6 – Accidental Release Measures

Personal precautions
Shut off all sources of ignition. Wear chemical-resistant gloves and chemical safety goggles or safety glasses with side shields. Provide adequate ventilation.

Environmental precautions
Provide adequate ventilation. Avoid runoff to sewers and waterways.

Methods and materials for containment and cleaning up
Cover spill with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 – Handling and Storage

Precautions for safe handling
Avoid breathing vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. See section 8 for protective clothing. Use away from heat, sparks, open flame or any other ignition source. Wash hands thoroughly after handling.

Conditions for safe storage
Keep away from heat, sparks and open flame. In the opened canister, this product is sensitive to moisture.

Section 8 – Exposure Controls/Personal Protection

Control Parameters
None of the components of this product have occupational exposure limit values.

Engineering Controls
General room ventilation is expected to be sufficient for use of the product.

Protective Equipment
Use protective gloves; recommended order of use is 4H, butyl, neoprene, nitrile (NBR) and PVC-coated. Use eye protection and chemical protective clothing.

Hygiene
Wash thoroughly after handling. Wash contaminated clothing before reuse.

Section 9 – Physical and Chemical Properties

Appearance	Clear pale yellow or colourless liquid
Odour	Ethereal
Odour threshold	No data available
pH	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	33°C (91°F)
Evaporation rate	No data available
Flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	Heavier than air
Density	0.975 g/cm3 @ 20°C (68°F)
Water Solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

Section 10 – Stability and Reactivity

Reactivity
Reacts with water or moisture.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Unlikely

Conditions to avoid
Moisture, heat, flames and sparks.

Incompatible materials
Acids, strong oxidizing agents

Hazardous decomposition products
Reacts with water or moisture to form methanol. In a fire, carbon monoxide, carbon dioxide and silicon oxides are formed.

Section 11 – Toxicological Information

The toxicological properties of this product have not been investigated. Information for some components is provided below.

Acute toxicity

Oral LD50 rat:	Trimethoxyvinylsilane - 7340 - 7460 mg/kg
	N-(3-(trimethoxysilyl)propyl)ethylenediamine - 2995 mg/kg
	Trimethoxy(methyl)silane - 11685 mg/kg

Skin LD50 rabbit: Trimethoxyvinylsilane – 3460 - 4000 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine - >2000 mg/kg
Trimethoxy(methyl)silane – >9500 mg/kg

Inhalation LC50 rat: Trimethoxyvinylsilane - 16.79 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine – 1.49 – 2.44 mg/l
Trimethoxy(methyl)silane – >42.1 mg/l

Skin corrosion/irritation
Rabbit: Trimethoxyvinylsilane - no irritation
N-(3-(trimethoxysilyl)propyl)ethylenediamine – no irritation
Trimethoxy(methyl)silane – no irritation

Serious eye damage/irritation
Rabbit: Trimethoxyvinylsilane - no irritation
N-(3-(trimethoxysilyl)propyl)ethylenediamine - strongly irritating
Trimethoxy(methyl)silane – no irritation

Respiratory or skin sensitization
Guinea pig: Trimethoxyvinylsilane - did not elicit a delayed contact hypersensitivity response
N-(3-(trimethoxysilyl)propyl)ethylenediamine - may cause sensitization by skin contact
Trimethoxy(methyl)silane – no irritation

Repeated Dose Toxicity
Oral rat: Trimethoxyvinylsilane
NOAEL: <62.5 mg/kg
Lowest Observable Effect Level – 62.5 mg/kg

N-(3-(trimethoxysilyl)propyl)ethylenediamine
NOAEL: >500 mg/kg
Exposure time: 28 d

Trimethoxy(methyl)silane
NOAEL: 50 mg/kg
Exposure time: 28 d

Germ cell mutagenicity
N-(3-(trimethoxysilyl)propyl)ethylenediamine: negative (Ames test)

Section 12 – Ecological Information

No data are available for the ecological effects of this product; information on some components is provided below.
The silane components of the product degrade through hydrolysis into alcohols and silanol and/or siloxanol compounds.
The product is not expected to be readily biodegradable.

Toxicity to fish: Trimethoxyvinylsilane
LC50 – 96 h
Species: Brachydanio
Result: >100 mg/l

Toxicity to fish:	Trimethoxyvinylsilane LC50 – 96 h Species: Oncorhynchus mykiss Result: >191 mg/l N-(3-(trimethoxysilyl)propyl)ethylenediamine LC50 Species: Lepomis macrochirus Result: >100 mg/l
Toxicity to other organisms:	Trimethoxyvinylsilane EC50 – 48 h Species: Daphnia magna Result: >100 mg/l N-(3-(trimethoxysilyl)propyl)ethylenediamine EC50 – 48 h Species: Daphnia magna Result: 87.4 mg/l
Toxicity to algae:	Trimethoxyvinylsilane EC50 – 72 h Species: Desmodesmus subspicatus Result: >100 mg/l N-(3-(trimethoxysilyl)propyl)ethylenediamine EC50 - 96 h Species: Pseudokirchneriella subcapitata Result: 8.8 mg/l N-(3-(trimethoxysilyl)propyl)ethylenediamine NOEC Species: Pseudokirchneriella subcapitata Result: 3.1 mg/l
Toxicity to microorganisms:	Trimethoxyvinylsilane NOEC Species: Bacteria Result: >1000 mg/l Exposure time: 3 h

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Section 13 – Disposal Considerations

Product
Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging
Dispose of as product.

Section 14 – Transport Information

DOT/IATA/IACO/IMDG/TDG
Shipping Name: FLAMMABLE LIQUID, N.O.S. (Trimethoxyvinylsilane)
UN #: 1993
Class: 3
Packing Group: III

Section 15 –Regulatory Information

All components of this product are listed in the U.S. Toxic Substances Control Act (TSCA) Inventory.

All components of this product are on the Canadian Domestic Substances List (DSL).

All components of this product are on or in compliance with the Australian Inventory of Chemical Substances (AICS).

A chemical safety assessment has not been carried out for this product.

Section 16 –Other Information

HMIS CLASSIFICATION

Health Hazard	3
Flammability	2
Reactivity	1

Notes to this Revision

This version 2.1 (April 21, 2015) has been considerably revised from the previous of April 4, 2011 to conform to the requirements of the GHS, OSHA Hazard Communications Standard 2012, WHMIS 2015 and (EU) No 453/2010 from June 1, 2015.

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