



# SAFETY DATA SHEET

PVC solvent cement  
404

**GENE™ 404L**  
Low VOC PVC solvent cement

## SECTION 1 – PRODUCT AND COMPANY INFORMATION

Product Name  
Gene 404L Low VOC

Product Codes  
55011, 55013, 55014, 55015, 55017, 55019, 55021, 55023,  
55901, 55902, 55904, 55906, 55908

Chemical Family  
Organic

Use  
PVC solvent cement

Manufacturer's Name  
The RectorSeal Corporation  
2601 Spenwick Drive  
Houston, Texas 77055 USA

Date of Validation  
January 23, 2015

Date of Preparation  
October 27, 2014

HMIS Codes  
Health 2  
Flammability 3  
Reactivity 1  
PPI B

Emergency Telephone No.  
Chemtrec 24 Hours  
(800)-424-9300 USA  
(703)-527-3887 International  
Technical Service Telephone No.  
(800)-231-3345 or (713)-263-8001

## SECTION 2 – HAZARDS IDENTIFICATION

### GHS CLASSIFICATION

#### Physical Hazards

Flammable Liquid, Category 2

#### Health Hazards

##### Acute Toxicity:

Oral: Category 4

Dermal: Category 5

Inhalation: Category 4

Skin Corrosion/Irritation: Category 3

Serious Eye Damage/Eye Irritation: Category 2A

Skin Sensitization: Not Classified

Respiratory Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Category 2  
Reproductive Toxicology: Not Classified  
Target Organ Systemic Toxicity - Single Exposure: Category 3  
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

## GHS Label elements, including precautionary statements



GHS02: Flammable  
GHS08: Severe Health Hazard  
Signal Word: **Danger**

### Hazard Statements:

H225 - Highly flammable liquid and vapor  
H302 - Harmful if swallowed.  
H313 - May be harmful in contact with skin.  
H316 - Causes mild skin irritation.  
H318 - Causes serious eye damage.  
H319 - Causes serious eye irritation  
H335 + H336 - May cause respiratory irritation, and drowsiness or dizziness.  
H351 - Suspected of causing cancer. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

### Precautionary Statements:

P102 - Keep out of reach of children.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P240 - Ground/Bond container and receiving equipment.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash hands thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P362 - Take off contaminated clothing and wash before reuse.

EUH066 - Repeated exposure may cause skin dryness or cracking.

Hazards not otherwise classified (HNOC) or not covered by GHS.

May form explosive peroxides.

## Summary Of Acute Hazards

Overexposure may cause coughing, shortness of breath, dizziness, central nervous system depression, intoxication and collapse. It may cause irritation to the respiratory tract and to other mucous membranes.

**Route Of Exposure, Signs And Symptoms****INHALATION**

Overexposure may cause coughing, shortness of breath, dizziness, central nervous system depression, intoxication and collapse. It may cause irritation to the respiratory tract and to other mucous membranes.

**EYE CONTACT**

Severely irritating. If not removed promptly, will injure eye tissue, which can result in permanent damage.

**SKIN CONTACT**

Frequent or prolonged contact may irritate and cause dermatitis. Low order of toxicity.

**INGESTION**

Low order of toxicity. Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.

**SUMMARY OF CHRONIC HAZARDS**

Repeated or prolonged exposure may cause signs of central nervous system depression and respiratory irritation. This material has been shown to induce tumors in laboratory animals.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

**Ingredient:** Methyl Ethyl Ketone

Percentage By Weight: 20-40

CAS Number: 78-93-3

EC#: 606-002-00-3

**Ingredient:** Tetrahydrofuran

Percentage By Weight: 20-40

CAS Number: 109-99-9

EC#: 603-025-00-0

**Ingredient:** Cyclohexanone

Percentage By Weight: 1-20

CAS Number: 108-94-1

EC#: 606-010-00-7

**Ingredient:** Acetone

Percentage By Weight: 5-20

CAS Number: 67-64-1

EC#: 200-662-2

## SECTION 4 – FIRST AID MEASURES

- If inhaled: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
- If on skin: Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing.
- If in eyes: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.
- If swallowed: If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

## SECTION 5 – FIRE FIGHTING MEASURES

### Conditions Of Flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

### Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Special Protective Equipment For Fire-Fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### Hazardous Combustion Products

Hazardous decomposition products formed under fire conditions (carbon oxides.)

### Further Information

Use water spray to cool unopened containers.

**Unusual Fire And Explosion Hazards:** Extremely flammable – very low flash point. Vapors are heavier than air and may travel along ground or to low spots at considerable distance to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture closed containers.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Ventilate area with natural or explosion-proof, forced air ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

### Environmental Precautions

Prevent further leakage or spillage if safe to do so. Avoid flushing into sewers, drains, waterways, and soil.

### Methods And Materials For Containment And Cleaning Up

Use absorbent materials to prevent footing hazard and to contain, then collect and place in container for disposal according to local regulations (see section 13).

**SECTION 7 – HANDLING AND STORAGE**

**Precautions For Safe Handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Avoid prolonged or repeated contact with skin or clothing. If transferring this material to other containers, ground all containers to avoid static electricity buildup and discharge which may ignite flammable vapors.

**Conditions For Safe Storage**

Do not store near heat, sparks, or open flames. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain residues and vapors; treat as if full and observe all products precautions. Do not reuse empty containers.

KEEP OUT OF REACH OF CHILDREN.

**SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ingredient	Units
<b>Methyl Isobutyl Ketone</b>	
ACGIH TLV:	200 ppm
OSHA PEL:	200 ppm
STEL:	300 ppm
<b>Tetrahydrofuran</b>	
ACGIH TLV:	50 ppm
OSHA PEL:	200 ppm
STEL:	250 ppm
<b>Cyclohexanone</b>	
ACGIH TLV:	20 ppm (skin)
OSHA PEL:	50 ppm
<b>Acetone</b>	
ACGIH TLV:	500 ppm
OSHA PEL:	1000 ppm
STEL:	750 ppm

**Respiratory Protection (Specify Type):** In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.

**Ventilation – Local Exhaust:** Acceptable

**Special:** Explosion-proof equipment.

**Mechanical (General):** Preferable

**Other:** N/A

**Protective Gloves:** Wear rubber gloves.

**Eye Protection:** Chemical splash goggles (ANSI Z-87.1 or equivalent)

**Other Protective Clothing Or Equipment:** Coveralls recommended.

**Work/Hygienic Practices:** Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling point:	151°F (66°C) @ 760 mmHg
Specific gravity (H <sub>2</sub> O = 1):	0.91
Vapor pressure (mmHg):	129 @ 68°F (20°C)
Melting point:	N/A
Vapor Density (Air = 1):	2.5
Evaporation rate (Ethyl Acetate = 1):	8 – 14.5
Appearance/Odor:	Liquid/Pungent odor
Solubility in water:	Soluble
Volatile Organic Compounds (VOC) Content (theoretical percentage by weight):	510 g/L per SCAQMD Test Method 316A
Flash point:	4.1°F (-17°C) SETA CC
Lower explosion limit:	1.8%
Upper explosion limit:	11.8%

## SECTION 10 – STABILITY AND REACTIVITY

**Chemical Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Can form potentially explosive peroxides upon long standing in air.  
Vapors may form explosive mixture with air.

**Conditions To Avoid:** Heat, sparks, open flames, and strong oxidizing, acidic and basic conditions.

**Incompatibility (Materials To Avoid):** Oxidizers, acids and bases.

**Hazardous Decomposition Products:** CO, CO<sub>2</sub>, HCl and fragmented hydrocarbons.

**Hazardous Polymerization:** Will not occur.

## SECTION 11 – TOXICOLOGY INFORMATION

**Chronic Health Hazards**

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Tetrahydrofuran – The National Toxicology Program has reported that exposures of mice and rats to THF vapor levels up to 1800 ppm 6hr/day, 5 days/week for their lifetime caused an incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF.

Toxicology Data

Ingredient Name

**Methyl Isobutyl Ketone**

Oral-Rat LD50: 2737 mg/kg  
 Inhalation-Rat LC50: 23,500 mg/m<sup>3</sup>/8H

**Tetrahydrofuran**

Oral-Rat LD50: 1650 mg/kg  
 Inhalation-Rat LC50: 21,000 ppm/3H

**Cyclohexanone**

Oral-Rat LD50: 1535 mg/kg  
 Inhalation-Rat LC50: 8000 ppm/4H

**Acetone**

Oral-Rat LD50: 5800 mg/kg  
 Inhalation-Rat LC50: 50,100 mg/m<sup>3</sup>

**SECTION 12 – ECOLOGICAL INFORMATION**

**Ecological Data**

Ingredient Name: **Methyl Isobutyl Ketone**  
 Food Chain Concentration Potential: None  
 Waterfowl Toxicity: N/A  
 BOD: 214%  
 Aquatic Toxicity: 5640 mg/L/48 hr/bluegill/TLm/fresh water

Ingredient Name: **Tetrahydrofuran**  
 Food Chain Concentration Potential: None  
 Waterfowl Toxicity: N/A  
 BOD: N/A  
 Aquatic Toxicity: N/A

Ingredient Name: **Cyclohexanone**  
 Food Chain Concentration Potential: None  
 Waterfowl Toxicity: N/A  
 BOD: N/A  
 Aquatic Toxicity: N/A

**Ecological Data (cont.)**

Ingredient Name:	<b>Acetone</b>
Food Chain Concentration Potential	None
Waterfowl Toxicity	N/A
BOD	N/A
Aquatic Toxicity	LC50/96-hour for fish > 100 mg/L

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Classification:** RCRA classified hazardous waste. Dispose of absorbed materials and liquid waste in approved, controlled incineration facility in accordance with all local, state and federal regulations.

**Disposal Method:** Incineration.

**SECTION 14 – TRANSPORTATION INFORMATION**

DOT:	UN1133, Adhesives, Class 3, PG II, ERG#127. Quarts and less: Consumer Commodity, ORM-D
Ocean (IMDG):	UN1133, Adhesives, Class 3, PG II, EMS-No: F-E, S-D Quarts and less: Adhesives, Class 3, UN 1133, PG II, Limited Quantities or Ltd. Qty.
Air (IATA):	UN1133, Adhesives, Class 3, PG II, ERG#127
WHMIS (Canada):	Class B-2

**SECTION 15 – REGULATORY INFORMATION**

**Regulatory Data**

Ingredient Name:	<b>Methyl Ethyl Ketone</b>
SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	5,000 lb.
RCRA Code	U159

Ingredient Name:	<b>Tetrahydrofuran</b>
SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	1,000 lb.
RCRA Code	U213



**Regulatory Data (cont.)**

Ingredient Name: **Cyclohexanone**  
SARA 313 N/A  
TSCA Inventory Yes  
CERCLA RQ 5,000 lb.  
RCRA Code U057

Ingredient Name: **Acetone**  
SARA 313 No  
TSCA Inventory Yes  
CERCLA RQ 5,000 lb.  
RCRA Code U002

**SECTION 16 – OTHER INFORMATION**

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
The information herein is given in good faith, but no warranty, expressed or implied is made.

Consult RectorSeal for further information: (713) 263-8001