



Revision Date: 06/23/2003

Print date: 06/23/2003

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite(R) 598 Black RTV High Performance Silicone Gasket Maker
Product type: Silicone Sealant
Company address: Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item number: 34018 / IDH No. 274809
Region: United States
Contact Information:
Telephone: (860) 571-5100
Emergency telephone: (860) 571-5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous components</u> | <u>%</u> | <u>ACGIH TLV</u> | <u>OSHA PEL</u> | <u>OTHER</u> |
|-----------------------------------|----------|--|--|--------------|
| Calcium carbonate 1317-65-3 | 30-60 | 10 mg/m ³ TWA (particulate matter containing no asbestos and <1% crystalline silica) | 15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction) | None |
| Vinyl oximino silane 2224-33-1 | 1-5 | None | None | None |
| Carbon black 1333-86-4 | 0.1-1 | 3.5 mg/m ³ TWA | 3.5 mg/m ³ TWA | None |
| Silica, quartz 14808-60-7 | 0-0.1 | 0.05 mg/m ³ TWA (respirable fraction) | 0.1mg/m ³ TWA (respirable) | None |

Exposure to moisture during cure will release 3-5% methyl alcohol. Methyl ethyl ketoxime(MEKO) is formed during cure. This product will release up to 5% MEKO.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

| | | |
|------------------------------|-----------------------------|---------------|
| Physical state: Paste | HEALTH: | 1 |
| Color: Black | FLAMMABILITY: | 1 |
| Odor: Mild | PHYSICAL HAZARD: | 0 |
| | Personal Protection: | See Section 8 |

WARNING: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, inhalation, eyes, Ingestion

Potential Health Effects

Inhalation: Vapors and mist irritate the respiratory tract and nasal passages. When heated to temperatures exceeding 300° F (150° C) in the presence of air, silicones may form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Vapors irritate the eyes, nose and throat. Safe handling conditions may be maintained by keeping formaldehyde vapor concentrations below the OSHA permissible limit. The silane is a skin and eye irritant and may cause skin burns. Overexposure may cause coma and respiratory failure. The low concentration makes such overexposure unlikely and minimizes its affect on health and safety.

Skin contact: May cause skin irritation with discomfort or rash.

Eye contact: Vapors may irritate eyes. Contact with eyes will cause irritation.

Ingestion: Moderately toxic by ingestion. Not expected under normal conditions of use.

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Existing conditions aggravated by exposure: Skin disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

Skin contact: Wipe off paste with paper towel or cloth. Wash with soap and water.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: Greater than 93°C (200°F) Tagliabue closed cup

Autoignition temperature: Not available

Flammable/Explosive limits-lower %: Not applicable

Flammable/Explosive limits-upper %: Not applicable

Extinguishing media: Carbon dioxide (CO₂). Foam. Dry chemical.

Special fire fighting procedures: None

Unusual fire or explosion hazards: None

Hazardous combustion products: Formaldehyde. Silica fume.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Do not flush into surface water or sanitary sewer system.

Clean-up methods: Scrape up as much material as possible. Maintain good ventilation for large spills. Place scrap material in a well ventilated area and allow to cure to rubber.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Do not wear contact lenses.

Storage: Store in a dry area below 90° F Keep container closed.

Incompatible products: Never allow product to get in contact with water during storage.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Skin protection: Chemical resistant, impermeable gloves. Impervious clothing

Eye/face protection: Safety goggles or safety glasses with side shields.

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See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|----------------------------------|
| Physical state: | Paste |
| Color: | Black |
| Odor: | Mild |
| Vapor pressure: | <5 mmHg @20°C (68° F) |
| pH: | Not applicable |
| Boiling point/range: | Not applicable |
| Melting point/range: | Not available |
| Specific gravity: | 1.3 at 20 deg. C |
| Vapor density: | Heavier than air |
| Evaporation rate: | Not available |
| Solubility in water: | Polymerizes in presence of water |
| Partition coefficient (n-octanol/water): | Not available |
| VOC content: | 4.3%; 56 grams/liter |

10. STABILITY AND REACTIVITY

| | |
|-----------------------------------|--|
| Stability: | Stable. |
| Hazardous polymerization: | Will not occur. |
| Hazardous decomposition products: | Methyl ethyl ketoxime formed during cure |
| Incompatibility: | Polymerizes on contact with water |
| Conditions to avoid: | Moisture. |

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

| Hazardous components | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen |
|----------------------|------------------|-----------------|-----------------|
| Calcium carbonate | No | No | No |
| Vinyl oximino silane | No | No | No |
| Carbon black | No | Group 2B | No |
| Silica, quartz | Known Carcinogen | Group 1 | Yes |

Literature Referenced Target Organ & Other Health Effects

| Hazardous components | Health Effects/Target Organs |
|----------------------|---|
| Calcium carbonate | Nuisance dust |
| Vinyl oximino silane | Allergen, Irritant |
| Carbon black | Respiratory, Some evidence of carcinogenicity |
| Silica, quartz | Some evidence of carcinogenicity, Lung, Immune system |

12. ECOLOGICAL INFORMATION

| | |
|-------------------------|---|
| Ecological information: | No specific studies have been conducted by Loctite on the ecotoxicity or environmental fate of this material; however, commonly available data on the material indicate that uncontrolled releases to soil, groundwater, or surface waters could entail acute and/or chronic ecological effects, depending on the quantity and concentration of such releases. Releases of volatile components to the atmosphere are not believed to entail significant ecological consequences provided such releases are within the exposure levels set forth in this document. Accordingly, all appropriate measures should be taken to avoid uncontrolled releases to the environment, and any spills or other uncontrolled releases which may occur should be contained and cleaned up immediately in accordance with Section 6. |
|-------------------------|---|

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Cured rubber can be incinerated or landfilled following EPA and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR:

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None
Exceptions: None
Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: Methyl ethyl ketoxime (CAS# 96-29-7).

CERCLA/SARA Section 302 EHS: None.

CERCLA/SARA Section 311/312: None.

CERCLA/SARA 313: None.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Toluene (CAS# 108-88-3). <1 ppm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.

WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections:

New Material Safety Data Sheet format.

Prepared by: Regulatory Affairs

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