LOCTITE CORPORATION

09/11/96

ROCKY HILL, CONNECTICUT 06067 EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET Page 01 of 05

Permatex(R) 598 Ultra Black(R) Hi-Temp RTV 82180

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Permatex(R) 598 Ultra Black(R) Hi-Temp RTV Silicone Sensor-Safe Gasket Maker Item No.: 82180 598BR Part No.: Product Type: RTV Silicone

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	olo
Poly(dimethylsiloxane),		
hydroxy terminated	70131-67-8	35-40
Calcium carbonate	471-34-1	30-35
<pre>Poly(dimethylsiloxane),</pre>		
dimethyl	63148-62-9	15-20
Modified silicon dioxide	68611-44-9	5-10
Vinyl oximinosilane	2224-33-1	3-5
ALUMINUM	7429-90-5	0.1-1
CARBON BLACK	1333-86-4	0.1-1
Methyl ethyl ketoxime	Proprietary	* * *

***When this product is exposed to moisture, 5-10% methyl ethyl ketoxime may be formed.

Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
Calcium carbonate	10 mg/m3 dust	15 mg/m3 dust 5 mg/m3 respir.	None
Modified silicon dioxide ALUMINUM	10 mg/m3 10 mg/m3 dust	6 mg/m3 15 mg/m3 dust 5 mg/m3 respir.	6 mg/m3 None
CARBON BLACK Methyl ethyl ketoxime	3.5 mg/m3 TWA None	3.5 mg/m3 TWA None	5ppm 3 ppm TWA 10 ppm STEL
Exposure Limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)	

LOCTITE CORPORATION 09/11/96 ROCKY HILL, CONNECTICUT 06067 EMERGENCY PHONE: (860) 571-5100 MATERIAL SAFETY DATA SHEET Page 02 of 05 Product Name: Permatex(R) 598 Ultra Black(R) Hi-Temp RTV Silicone Sensor-Safe Gasket Maker Item No.: 82180 3. HAZARDS IDENTIFICATION Toxicity: Eye and skin irritant. Moderately toxic by ingestion. When heated to temperatures above 300°F (150°C) in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Vapors irritate eyes, nose and throat. Safe handling conditions may be maintained by keeping vapor concentrations below the OSHA permissible limit for formaldehyde. Primary Routes of Entry: Skin, ingestion, inhalation. Signs and symptoms of Exposure: Methyl ethyl ketoxime produced during cure is toxic and irritates eyes, nose and throat. Existing Conditions Aggravated by Exposure: None known Literature Referenced Carcinogen Ingredients Target Organ and Other Health Effects NTP IARC OSHA Poly(dimethylsiloxane), hydroxy terminated Calcium carbonate No Data NO NO NO NO NO NUI NO Poly(dimethylsiloxane), IRR No Data dimethvl NO NO NO Modified silicon dioxide NO NO NO Vinyl oximinosilane No Data NO NO NO ALUMINUM IRR LUN NO NO NO RES CARBON BLACK NO 2B NO Methyl ethyl ketoxime ALG BLO CNS IRR NO NO NO _____ Abbreviations 2B Possibly carcinogenic to humans ALG Allergen BLO Blood CNS Central nervous system LUN Lung IRR Irritant NUI Nuisance dust RES Respiratory 4. FIRST AID MEASURES Do not induce vomiting. Keep individual calm. Ingestion: Obtain medical attention Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.

Wipe off paste with paper towel or cloth.

Skin Contact:

LOCTITE CORPORATION 09/11/96 ROCKY HILL, CONNECTICUT 06067 EMERGENCY PHONE: (860) 571-5100 MATERIAL SAFETY DATA SHEET Page 03 of 05 Product Name: Permatex(R) 598 Ultra Black(R) Hi-Temp RTV Silicone Sensor-Safe Gasket Maker Item No.: 82180 4. FIRST AID MEASURES (continued) Wash thoroughly with soap and water Flush at least 15 minutes with water. Obtain Eye Contact: medical attention. FIRE FIGHTING MEASURES 5. Flash Point: More than 200°F Method: Tag Closed Cup Recommended Extinguishing Agents: Carbon dioxide, foam, dry chemical Hazardous Products formed by Fire or Thermal Decomp Formaldehyde, silica fume Unusual Fire or Explosion Hazards: None Explosive Limits: (% by volume in air)Lower Not available (% by volume in air)Upper Not available 6. ACCIDENTAL RELEASE MEASURES Steps to be taken in case of spill or leak: Wipe or scrape up spilled material. Maintain good ventilation for large spills. Place scrap material in a well ventilated area and allow to cure to rubber. 7. HANDLING AND STORAGE Store in a dry area below 90°F. Keep Safe Storage: containers closed when not in use. (Contact Loctite Customer Service 1-800-243-4874 for shelf Life information) Handling: Avoid skin and eye contact. Avoid breathing vapor. 8. EXPOSURE CONTROLS, PERSONAL PROTECTION Eyes: Safety glasses or goggles. Avoid contact lenses. Skin: Rubber or plastic gloves. Ventilation: Provide local ventilation for prolonged use in a confined area. See Section 2 for Exposure Limits. 9. PHYSICAL AND CHEMICAL PROPERTIES Appearance: Black paste Odor: Mild Boiling Point: Not Applicable, Polymeric

LOCTITE CORPORATION 09/11/96 ROCKY HILL, CONNECTICUT 06067 EMERGENCY PHONE: (860) 571-5100 MATERIAL SAFETY DATA SHEET Page 04 of 05 Product Name: Permatex(R) 598 Ultra Black(R) Hi-Temp RTV Silicone Sensor-Safe Gasket Maker Item No.: 82180 9. PHYSICAL AND CHEMICAL PROPERTIES (continued) pH: 7-8 Solubility in Water: Polymerized Specific Gravity 1.3 Volatile Organic Compound (EPA Method 24) 4.3%; 56 grams per liter Vapor Pressure: Less than 5mm at 70°F Vapor Density: 3.0 Evaporation Rate Not available (Ether = 1)10. STABILITY AND REACTIVITY Stability: Stable Hazardous Polymerization: Will not occur Strong oxidizers. Polymerized by contact with Incompatibility: moisture. Hazardous Decomposition Products (non-thermal): Methyl ethyl ketoxime 11. TOXICOLOGICAL INFORMATION See Section 3. 12. ECOLOGICAL INFORMATION No data available 13. DISPOSAL CONSIDERATIONS Recommended methods of disposal: Cured rubber can be incinerated or landfilled following EPA and local regulations EPA Hazardous Waste Number NH - Not a RCRA Hazardous Waste Material 14. TRANSPORT INFORMATION DOT (49 CFR 172) Domestic Ground Transport Proper Shipping Name: Unrestricted Hazard Class or Division: Unrestricted Identification Number: None Marine Pollutant: None IATA Proper Shipping Name: Unrestricted Class or Division: Unrestricted

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14. TRANSPORT INFORMATIO	Ν	(continued)		
UN or ID Number:	None			
15. REGULATORY INFORMATION				
CA Proposition 65:	No Prop65 chemicals are known to b	e present.		
16. OTHER INFORMATION				
Estimated NFPA(R) Code: Health Hazard: Fire Hazard: Reactivity Hazard: Specific Hazard:	1 1 1 No water			
Estimated HMIS(R) Code: Health Hazard: Flammability Hazard: Reactivity Hazards: Personal Protection:	1 1 1 See Section 8.			
NFPA is a registered HMIS is a registered				
Prepared By: Title: Company: (24hr.) Phone: Revision Date:	Stephen Repetto Research Chemist, Environmental He Loctite Corp., 1001 Tr Br Cr, Rock (860) 571-5100 January 22, 1996 Revi	_		