

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Black RTV Silicone Adhesive**Product Number:** 226 and 227**Manufacturer:**Federal Mogul Corporation
Sealing Systems
7450 North McCormick Blvd.
Skokie, IL 60076**Phone:** (847)674-7700**Emergency Phone:** 1-800-535-5053 (Infotrac)

SECTION 2: COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Ingredient	CAS No.:	% Weight	OSHA PEL	ACGIH TLV
Amorphous silica	7631-86-9	10-20	80 mg/m ³ / % SiO ₂	10 mg/m ³ * (inhalable) 5 mg/m ³ * (respirable)
Methyltriacetoxysilane	4253-34-3	1-5	None Established	None Established
Ethyltriacetoxysilane	17689-77-9	1-5	None Established	None Established

* Value is for particulate matter containing no asbestos and < 1% crystalline silica.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Combustible black adhesive paste with vinegar odor. May cause moderate eye irritation and skin irritation with repeated contact. Forms acetic acid when exposed to water or humid air. Inhalation of acetic acid may irritate the respiratory tract and eyes and adversely affect the lungs. Heating to temperatures above 302 °F in the presence of air can form hazardous formaldehyde vapors.

POTENTIAL HEALTH EFFECTS:

Inhalation: Vapors may irritate the nose and throat. Forms acetic acid in the presence of moisture or human air (See Section 8). Use in confined or poorly ventilated area may result in high concentrations of fumes that can have harmful lung effects.

Skin: May cause irritation. Repeated or prolonged contact (24-48 hours) may cause moderate irritation, swelling, and redness.

Eye: May cause moderate irritation, redness and swelling.

Ingestion: Limited data is available. Accidentally ingesting small amounts transferred from the fingers to the mouth during handling is not expected to have toxic effects. Larger amounts may be harmful.

Chronic: Repeated inhalation of acetic acid vapors may cause chronic upper respiratory irritation and bronchitis. Heating product to temperatures above 302 °F (150 °C) in the presence of air can produce formaldehyde vapors. Formaldehyde can irritate the eyes, nose, throat, skin, and digestive tract; may cause skin and respiratory sensitization; and can increase the risks of developing cancer (See Section 8).

Carcinogenicity: Does not contain carcinogenic substances. May produce formaldehyde, a substance classified as a carcinogen by IARC, NTP, and OSHA at temperatures above 150 °C.

IARC: No

NTP: No

OSHA: No

POTENTIAL HEALTH EFFECTS (CONTINUED)

Medical Conditions Aggravated by Exposure: None known. Repeated contact may aggravate pre-existing eye and skin conditions. Repeated inhalation of acetic acid vapors may aggravate pre-existing respiratory conditions.

	HEALTH	FLAMMABILITY	INSTABILITY/ PHYSICAL HAZARD
NFPA Rating:	2	1	0
HMIS Rating:	2	1	0

SECTION 4: FIRST AID MEASURES

Ingestion: If conscious, drink 4-8 ounces of water or milk. DO NOT INDUCE VOMITING or give liquids to an unconscious person. Call a poison control center or emergency medical facility immediately.

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention if respiratory irritation or breathing problems occur.

Eye Contact: Immediately flush with large amounts of water for at least 15 minutes and get medical attention.

Skin Contact: Remove contaminated clothing and wash skin thoroughly with large amounts of soap and water. If irritation persists get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flashpoint: 200 °F **LEL:** No Data **UEL:** No Data **Autoignition Temperature:** No Data (Setaflash Closed Cup)

Extinguishing Media: Foam, dry chemical, carbon dioxide, water spray or fog. If substantial quantities are involved in a fire, the use of a direct water stream may cause violent frothing.

Unusual Fire and Explosion Hazards: Combustible. Will evolve formaldehyde at temperatures above 302 °F (150 °C). Fire may produce formaldehyde, silicon dioxide, carbon oxides, and other oxidation products.

Special Fire Fighting Procedures: Firefighters should wear a NIOSH approved self-contained breathing apparatus operated in positive pressure mode and full turnout or bunker gear with additional chemical protective clothing as necessary to prevent exposure to formaldehyde.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Wear appropriate protective equipment (See Section 8). Wipe up small amounts with rag or paper towel. Scoop larger amounts into clean, dry container for later recycle or disposal. Wash area of spill with soap and water. Appropriately dispose of rags and towels.

SECTION 7: HANDLING AND STORAGE

Combustible material. Store in cool, dry, well-ventilated area away from heat, flames, sunlight, and incompatible materials. Keep away from water or moisture and temperatures at or above 302 °F (150°C). Protect from physical damage.

Use in well ventilated areas. Do not eat, drink, or smoke in work and storage areas or store food, cosmetics, cigarettes or other personal items in these areas. Dispose of empty containers appropriately. Avoid skin and eye contact. Wash thoroughly after handling. Keep out of reach of children. For industrial use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: None required under normal working conditions. If ventilation is insufficient to control air contaminants, select NIOSH approved respiratory protection according to the magnitude of exposure. Select and maintain respirators in accordance with 29 CFR 1910.134.

Ventilation Protection: General ventilation. Use local exhaust for heating or use in confined or poorly ventilated areas.

Skin Protection: Gloves as suitable for the job. For prolonged or repeated contact, wear gloves of suitable material to prevent irritation.

Eyes: Protective goggles.

Other: Emergency eyewash stations should be located in close proximity to work area. The OSHA PEL and ACGIH TLV for acetic acid are both 10 ppm. ACGIH has established a STEL of 15 ppm for acetic acid. The ACGIH ceiling concentration for formaldehyde is 0.3 ppm and OSHA regulates formaldehyde under 29 CFR 1910.1048 with a PEL of 0.75 ppm ; a STEL of 2 ppm and an action level of 0.5 ppm.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	No Data	Vapor Pressure (@ 20 °C):	Low
Melting Point:	No Data	Vapor Density (air = 1):	> 1
pH:	N/A	% Volatile:	Not Applicable
Specific Gravity:	1.03	Evaporation Rate:	Slower than butyl acetate
Water Solubility:	Not Soluble		
Appearance and Odor:	Black paste with acetic acid (vinegar) odor		

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions and use.

Incompatibility (materials/conditions to avoid): Incompatible with oxidizers. Keep product dry to avoid formation of acetic acid. Avoid temperatures above 150 °C to prevent formation of formaldehyde vapors.

Hazardous Polymerization: Will not occur

Decomposition Products: Thermal decomposition will produce silicon dioxide, carbon oxides, formaldehyde and other oxidation products.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: Workers exposed to concentrations > 30 ppm acetic acid exhibited conjunctivitis, bronchitis, and undue irritation of the skin, respiratory tract, and digestive system. Minor respiratory changes were noted in guinea pigs that inhaled 5 ppm acetic acid and effects became more pronounced at 100 ppm. Bronchiopneumonia and pulmonary edema have been reported following acute acetic acid exposure.

Skin: May cause irritation with repeated or prolonged contact.

Eye: A splash of 4-10% acetic acid solution causes immediate pain and conjunctiva hyperemia with occasional injury of the corneal epithelium.

Ingestion: Compound specific data was unavailable. Manufacturer information indicates small amounts are not harmful.

Subchronic/Chronic: Chronic exposure to acetic acid may cause bronchitis and pharyngitis. Release of amorphous silica is not expected; however, repeated inhalation of amorphous silica can cause relatively benign lung fibrosis (pneumoconiosis).

SECTION 12: ECOLOGICAL INFORMATION

Data was unavailable for mixture.

SECTION 13: DISPOSAL CONSIDERATIONS

Recycle, reclaim, and dispose of in accordance with applicable local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name:	None
Hazard Class:	Not Applicable
Identification Number:	Not Applicable
Packing Group:	Not Applicable
Shipping Label:	Not Applicable
Additional Marking Requirement:	None

SECTION 15: REGULATORY INFORMATION

California Proposition 65: This product contains does not contain ingredients known to the State of California to cause cancer and reproductive toxicity.

SARA TITLE III – SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

RCRA HAZARDOUS WASTE CODE: None

CERCLA Hazardous Substances: This product does not contain CERCLA Hazardous Substances.

OSHA: Aside from PELs, OSHA has not developed standards or PELs specific to this product or its constituents.

U.S. TSCA: All ingredients are listed on the U.S. Toxic Substances Control Act (TSCA) inventory or exempt from listing.

WHMIS Classification: D2B

SECTION 16: OTHER INFORMATION

Abbreviations:

N/A:	Not Applicable
(C):	Ceiling Limit (e.g., concentration that may not be exceeded at any time)
OSHA PELs:	U.S. Occupational Safety and Health Administration Permissible Exposure Limits
ACGIH TLVs:	American Conference of Governmental Industrial Hygienists Threshold Limit Values
NIOSH RELs:	National Institute for Occupational Safety and Health Recommended Exposure Limits
PNOC:	Particulates (Insoluble) Not Otherwise Classified
PNOR:	Particulates Not Otherwise Regulated
STEL:	Short-Term Exposure Limit
Skin:	Chemical can be Absorbed into bloodstream through unbroken skin
ppm:	Parts per million in air (v/v)
mg/m ³ :	milligrams contaminant per cubic meter of air
CAS #:	Chemical Abstract Services Number
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program

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