

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product Identifier :	Silver Plated Nickel Particle Filled Silicone Adhesive	
Product Code(s) :	Series 040	
Product Use :	Conductive Gasket Seal	
Chemical Family :	Mixture	
Supplier's Name and Address :	Manufacturer's Name and Address :	Refer to Supplier
	Ja-Bar Silicone Corporation	
	PO Box 1249	
	252 Brighton Road	
	Andover, NJ, USA	
	07821	
Information Telephone # :	24 Hr. Emergency Tel # :	(610)-390-4034
	(973) 786-5000	

SECTION 2 : HAZARDS IDENTIFICATION

Classification of the product
 WHMIS Classification
 Class D2B (Materials Causing Other Toxic Effects, Toxic Material)

OSHA
 This material is classified as hazardous under OSHA regulations (29 CFR 1910.1200)
 Acute Health Hazard
 Chronic Health Hazard

Emergency Overview
 Tan Paste. Odorless.

Caution! May cause eye and skin irritation. May be harmful if inhaled. May cause respiratory irritation. Could result in pulmonary edema (fluid accumulation). May be harmful or fatal if swallowed. May cause gastrointestinal irritation. This material is a potential aspiration hazard.

POTENTIAL HEALTH EFFECTS :

Signs and symptoms of short-term (acute) exposure

Skin	May cause mild to moderate irritation. Symptoms may include redness, itching, and swelling.
Eyes	May cause mild to moderate irritation. Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde gas causes moderate to severe eye irritation.
Ingestion	May cause irritation to mucous membrane. May cause nausea, vomiting, and diarrhea. Aspiration into the lungs during swallow may cause chemical pneumonitis, which can be fatal.
Inhalation	Vapours in high concentration may cause irritation of respiratory system. Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde causes severe respiratory irritation, lung inflammation, and pulmonary edema.

Effects of long-term (chronic) exposure

Prolonged skin contact may cause dermatitis.

Hazard Pictogram(s)



Carcinogenic status : See TOXICOLOGICAL INFORMATION, Section 11.
 Additional health hazards : See TOXICOLOGICAL INFORMATION, Section 11.
 Potential environmental effects : See ECOLOGICAL INFORMATION, Section 12.

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SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt %
Naphtha, petroleum, hydrotreated heavy	64742-48-9	3-7
Methyltrimethoxysilane	1185-55-3	1-5
Silver	7440-22-4	23.2
Nickel	7440-02-0	50.1

SECTION 4 : FIRST AID MEASURES

First Aid : Eyes

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

First Aid : Skin

Remove/Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.

First Aid : Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.

First Aid : Inhalation

If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. When symptoms persist or in all cases of doubt seek medical advice.

Notes For Physician :

Treat Symptomatically

SECTION 5 : FIRE FIGHTING MEASURES

Fire Hazards/Conditions of Flammability

Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure

Flammability Classification (OSHA 29 CFR 1910.1200)

Combustible Liquid Class III B

Oxidizing Properties

None Known

Explosion Data; Sensitivity to Mechanical Impact/Static Discharge

Avoid dust cloud formation. Finely divided dust clouds may be sensitive to static discharge and pose a dust explosion hazard. Not expected to be sensitive to mechanical impact.

Suitable Extinguishing Media

Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Special Fire-Fighting Procedures/Equipment

Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products

Carbon oxides; formaldehyde; metal oxides; silicon oxides; irritating fumes and smoke.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

The following recommendations are established general accepted practices of containment, not specific to this material.

Personal Precautions

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental Precautions

Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway of drinking supply.

Spill Response/Cleanup

Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Do not flush into surface water or sanitary sewer system. Contain spillage, soak up with non-combustible absorbent material, (e.g, sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see Section 13). Avoid dust formation. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

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Prohibited Materials

None known.

Special Spill Response Procedures

If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
 US CERCLA Reportable quantity (RQ): silver (with particle size of less than 100 micrometers)
 (1000 lbs / 454 kg)

SECTION 7 : HANDLING AND STORAGE

Safe Handling Procedures

Use only in well-ventilated areas. Wear suitable gloves and eye/face protection. Avoid dust formation. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothing. Keep away from heat. Protect from moisture. Keep container tightly closed. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Wash thoroughly after handling.

Storage Requirements

Keep containers tightly closed in a cool, well ventilated place. Keep away from heat. Inspect periodically for damage or leaks. Protect against physical damage. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

Incompatible Materials

Oxidizing agents, strong acids, ammonia, peroxides.

Special Packing Materials

Always keep in containers made of the same materials as the supply container.

SECTION 8 : EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits

Ingredients	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Silver Coated Metal	0.1 mg/m ³ (dust and fume)	N/Av	0.01 mg/m ³	N/Av
Trimethylated Silica	N/Av	N/Av	N/Av	N/Av
Naphtha, petroleum, hydrotreated, heavy	N/Av	N/Av	N/Av	N/Av
Methyltrimethoxysilane	N/Av	N/Av	N/Av	N/Av
Possible decomposition products in case of hydrolysis are: Methanol	200 ppm	250 ppm	200 ppm ; 260 mg/m ³	N/Av
The following ingredient is released from the product only when heated above 150°C: Formaldehyde	N/Av	N/Av	0.75 ppm	2 ppm (see 29 CFR 1910.1048)

Ventilation and Engineering Measures

Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation, wear suitable respiratory equipment.

Respiratory Protection

In the case of vapour formation use a respirator with an approved filter. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, a self-contained breathing apparatus must be used.

Skin Protection

Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

Eye/Face Protection

Chemical safety glasses with side shields or splash proof goggles.

Other Protective Equipment

Chemical resistant apron. Safety boots per regulations. Ensure that eyewash stations and safety showers are close to the workstation location.

General Hygiene Considerations

Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Paste	Appearance	: Paste
Odour	: Odorless	Odour Threshold	: N/Av
Physical State	: N/Av	Specific Gravity	: > 1.0
Boiling Point:	: N/Av	Coefficient of Water/Oil Distribution	: N/Av
Melting/Freezing Point	: N/Av	Solubility in Water	: Insoluble
Vapour Pressure (mmHg@20°C/68°F)	: N/Av	Evaporation Rate (n-Butyl acetate = 1)	: N/Av
Vapour Density (Air=1)	: N/Av	Volatiles (% by weight)	: N/Av
Volatile Organic Compounds (VOC's)	: N/Av	Auto-ignition Temperature	: N/Av
Flash Point	: N/Av	Upper Flammable Limit (% by vol)	: N/Av
Flash Point Method	: N/Av	Flashback Observed	: N/Av
Lower Flammable Limit (% by vol.)	: N/Av		
Flame Projection Length	: N/Av		

SECTION 10 : STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions. May slowly hydrolyze in the present of water to Methanol. When heated above 150°C in air, may release formaldehyde gas.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Direct sources of heat.

Materials to Avoid and Incompatibility

Incompatible materials (see Section 7).

Hazardous Decomposition Products

None known, refer to hazardous combustion products in Section 5.

SECTION 11 : TOXICOLOGICAL INFORMATION

Target organs

Eyes, skin, respiratory system and digestive system.

Routes of Exposure

Inhalation : YES Skin Absorption : No Skin & Eyes : YES Ingestion : YES

Toxicological Data

There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data. Methanol and Formaldehyde are not intentionally added to this product.

Ingredients	LC50(4hr)	LD50	
	inh, rat	(Oral, rat)	(Rabbit, dermal)
Silver Metal	N/Av	>2000 mg/kg	N/Av
Trimethylated Silica	N/Av	N/Av	N/Av
Naphtha, petroleum, hydrotreated heavy	N/Av	N/Av	N/Av
Methyltrimethoxysilane	N/Av	12300 µL/kg	N/Av
Possible decomposition products in case of hydrolysis are: Methanol	64000ppm/4H	5628 mg/kg	15800 mg/kg
The following ingredient is released from the product only when heated above 150°C: Formaldehyde	287 ppm	800 mg/kg	300 mg/kg

Carcinogenic Status

Avoid heating, which will result in the liberation of carbon monoxide.

Reproductive Effects

Contains no ingredient listed as toxic to reproduction.

Teratogenicity

May slowly hydrolyze in the presence of water to Methanol. Methanol has been shown to produce fetotoxicity in the embryo or fetus in laboratory animals.

Mutagenicity

Contains no ingredient listed as a mutagen.

Epidemiology

Not available.

Sensitization to Material

Some fabrication processes may cause sensitization by skin contact. Avoid heating which will result in the liberation of formaldehyde gas.

Synergistic Materials

Not available.

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Irritancy

May cause eye, skin and respiratory tract irritation.

Conditions Aggravated by Overexposure

Pre-existing skin, eye and respiratory disorders.

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity :

No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Mobility :

The product itself has not been tested.

Persistence :

The product itself has not been tested.

Bioaccumulation Potential :

The product itself has not been tested.

Other Adverse Environmental Effects :

None known.

SECTION 13 : DISPOSAL CONSIDERATIONS

Handling for Disposal :

Handle waste according to recommendations in Section 7.

Methods of Disposal :

Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

RCRA :

If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies. Contains silver a, RCRA Hazardous waste number D011

SECTION 14 : TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
49CFR/DOT	None	Not Regulated	Not Regulated	None	☒
49CFR/DOT Additional information	None	Not Regulated	Not Regulated	None	
TDG	None	Not Regulated	Not Regulated	None	☒
TDG Additional Information	None	Not Regulated	Not Regulated	None	

SECTION 15 : REGULATORY INFORMATION

US Federal Information :

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): See Section 6

SARA TITLE III: Sec. 302, Extremely Hazardous

Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: Silver.

US State Right to Know Laws :

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

International Information :

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information :

This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

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SECTION 16 : OTHER INFORMATION

HMIS Rating * - Chronic Hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
Health : *1 Flammability : 1 Reactivity : 0

Legend :

ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program

SDS Preparation Data (dd/mm/yyyy) : 05/11/2015

OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TPQ: Threshold Planning Quantity
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References :

1. ACGIH, Threshold Limit Values and Biological Exposure Indices
2. International Agency for Research on Cancer Monographs, searched
3. Canadian Centre for Occupational Health and Safety, CInfoWeb databases, 2009 (Chempendium, HSDB and RTECs)
4. Safety Data Sheets from manufacturer
5. US EPA Title III List of Lists
6. California Proposition 65 List

Prepared for :

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