



SAFETY DATA SHEET

1. Identification

Product identifier Sil-Pad Products

Other means of identification

Product code Sil-Pad 400, 600, 700, 800, 900S, 950, 980, 1000, 1000L, 1100ST, 1200, 1500, 1500ST, 1750, 1950, 2000, 9516, A1500, A2000, K4, K6, K10, With/without Polyimide, With/without fiberglass, With/without Adhesives AC, AAC, AC2, ACA, EAAC, TAC, TAAC, ACL

Synonyms Sil-Pad * SP

Recommended use Thermally Conductive and Electrical Insulating Silicone Pad.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier The Bergquist Company

Address: 18930 West 78th Street
Chanhassen, MN. 55317

Non-Emergency calls: 1-800-347-4572

Contact person: AEHMSDS@henkel.com

Emergency telephone number

Chemical Emergency

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (Collect Calls Accepted)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Not applicable.

Hazard statement Not applicable.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash thoroughly after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information This product is not hazardous according to OSHA 29 CFR 1910.1200 requirements, therefore a hazard label does not apply.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Aluminum oxide	1344-28-1	90 - 100
Barium sulphate	7727-43-7	5 - 10

Cobalt chromite blue green spinel	68187-11-1	5 - 10
Iron oxide	1309-37-1	5 - 10
Polyalkyl siloxane	63148-62-9	5 - 10

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. Get medical attention if symptoms occur.
Skin contact	Wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	Rinse mouth thoroughly. Get medical attention if any discomfort occurs.
Most important symptoms/effects, acute and delayed	Under normal conditions of intended use, this material does not pose a risk to health.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Get medical attention if any discomfort develops.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	None.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
General fire hazards	This product is not flammable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with skin and eyes. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Sweep up or gather material and place in appropriate container for disposal. For waste disposal, see section 13 of the SDS.
Environmental precautions	Environmental Manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling	Provide adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Observe good industrial hygiene practices. Wear appropriate personal protective equipment (See Section 8).
Conditions for safe storage, including any incompatibilities	Store in closed original container in a dry place. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
Barium sulphate (CAS 7727-43-7)	PEL	5 mg/m ³	Respirable fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Cobalt chromite blue green spinel (CAS 68187-11-1)	PEL	15 mg/m3	Total dust.
		0.5 mg/m3	
Iron oxide (CAS 1309-37-1)	PEL	10 mg/m3	Fume.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
Barium sulphate (CAS 7727-43-7)	TWA	15 mppcf	Respirable fraction.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Iron oxide (CAS 1309-37-1)	TWA	50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Barium sulphate (CAS 7727-43-7)	TWA	5 mg/m3	Inhalable fraction.
Cobalt chromite blue green spinel (CAS 68187-11-1)	TWA	0.02 mg/m3	
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Barium sulphate (CAS 7727-43-7)	TWA	5 mg/m3	Respirable.
Cobalt chromite blue green spinel (CAS 68187-11-1)	TWA	10 mg/m3	Total
		0.5 mg/m3	
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m3	Dust and fume.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Follow standard monitoring procedures.
Appropriate engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Risk of contact: Wear approved safety goggles.
Skin protection	
Hand protection	Use suitable protective gloves if risk of skin contact. Suitable gloves can be recommended by the glove supplier.
Other	If prolonged or repeated contact is likely, chemical resistant clothing is recommended.
Respiratory protection	In case of inadequate ventilation, use respiratory protection.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.

9. Physical and chemical properties**Appearance**

Physical state Solid.

Form Solid.

Color Various.

Odor Slight.

Odor threshold Not relevant.

pH Not relevant.

Melting point/freezing point Not relevant.

Initial boiling point and boiling range Not relevant.

Flash point Not relevant.

Evaporation rate Not relevant.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not relevant.

Flammability limit - upper (%) Not relevant.

Explosive limit - lower (%) Not relevant.

Explosive limit - upper (%) Not relevant.

Vapor pressure Not relevant.

Vapor density Not relevant.

Solubility(ies)

Solubility (water) Insoluble (<0.1%)

Solubility (solvents) Not relevant.

Partition coefficient (n-octanol/water) Not relevant.

Auto-ignition temperature Not relevant.

Decomposition temperature Not relevant.

Viscosity Not relevant.

Other information

Bulk density Not available.

Density 1.50 - 3.20 (25 °C)

Explosive properties Not relevant.

Oxidizing properties Not relevant.

VOC Not relevant.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products None.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the mucous membranes and respiratory tract.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	May cause eye irritation on direct contact.
Ingestion	Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics Under normal conditions of intended use, this material does not pose a risk to health.

Information on toxicological effects

Acute toxicity Under normal conditions of intended use, this material does not pose a risk to health.

Components	Species	Test Results
Barium sulphate (CAS 7727-43-7)		
Acute		
Oral		
LD50	Rat	307 g/kg
Polyalkyl siloxane (CAS 63148-62-9)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	> 17000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Inhalation of carbon black dust may cause cancer, however due to the physical form of the product, inhalation of dust is not likely.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cobalt chromite blue green spinel (CAS 68187-11-1) 3 Not classifiable as to carcinogenicity to humans.

Iron oxide (CAS 1309-37-1) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects None known.

Further information None known.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous.

Persistence and degradability No data available.

Bioaccumulative potential No data available.

Mobility in soil The product is insoluble in water.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Contaminated packaging Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Barium sulphate (CAS 7727-43-7)	LISTED
Cobalt chromite blue green spinel (CAS 68187-11-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Aluminum oxide	1344-28-1	90 - 100
Cobalt chromite blue green spinel	68187-11-1	5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Cobalt chromite blue green spinel (CAS 68187-11-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Aluminum oxide (CAS 1344-28-1)
 Barium sulphate (CAS 7727-43-7)
 Iron oxide (CAS 1309-37-1)

US. New Jersey Worker and Community Right-to-Know Act

Aluminum oxide (CAS 1344-28-1)
 Barium sulphate (CAS 7727-43-7)
 Cobalt chromite blue green spinel (CAS 68187-11-1)
 Iron oxide (CAS 1309-37-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Aluminum oxide (CAS 1344-28-1)
 Barium sulphate (CAS 7727-43-7)
 Cobalt chromite blue green spinel (CAS 68187-11-1)
 Iron oxide (CAS 1309-37-1)

US. Rhode Island RTK

Aluminum oxide (CAS 1344-28-1)
 Barium sulphate (CAS 7727-43-7)
 Iron oxide (CAS 1309-37-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 01-July-2014
Revision date 09-June-2017
Version # 06
NFPA ratings

**List of abbreviations**

TWA: Time weighted average.
 PEL: Permissible Exposure Limit.
 EC50: Effective Concentration, 50%.
 LD50: Lethal Dose, 50%.

References

EPA: AQUIRE database
 IARC Monographs. Overall Evaluation of Carcinogenicity
 NLM: Hazardous Substances Data Base

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