

680-R3839R-###

Section 1: PRODUCT AND COMPANY IDENTIFICATION

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Product Part Number: 680-R3839R-###

Revision Date: 08 January 2009
Supersedes Date: not applicable

is a wild card for product width; this value does not affect the chemical composition of the product

Product Use: Thermal insulation

Section 2: HAZARDS IDENTIFICATION

Appearance: red silicone rubber on black fabric

Stability and Reactivity:

Product may form formaldehyde vapors at temperatures above 149°C (300°F) in the presence of air. A formaldehyde MSDS is available from Arlon upon request.

Likely Routes of Exposure:

Inhalation: May cause mechanical irritation.

Eye Contact: May cause irritation and dryness.

Skin Contact : May cause irritation and redness.

Chronic Health Hazards:

This product contains a proprietary opacifier whose elemental components include copper (1%) and manganese (1%). Chronic exposure to manganese and its compounds may have effects on the lungs and central nervous system.

Medical Conditions Aggravated by Exposure:

Excessive inhalation of dust may aggravate pre-existing chronic lung conditions including, but not limited to, bronchitis, emphysema, and asthma. Skin contact may aggravate existing dermatitis.

This product is considered hazardous by the OSHA Hazardous Communication Standard 29 CFR 1910.1200.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	CAS Number:	% by Weight:
Hazardous:		
Silica, gel, trimethylsilylated	1268770-03-0	50-70

Section 4: FIRST AID MEASURES

Eye Contact: Flush eyes with water for at least 15 minutes.

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Skin Contact: Wash skin thoroughly with soap and plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Obtain medical attention if symptoms occur.

Ingestion: Get medical attention.

Inhalation: Move to fresh air. Drink water to clear throat and blow nose to remove dust. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Section 5: FIRE FIGHTING MEASURES

Extinguishing Media:

Carbon dioxide, dry chemical, foam, alcohol foam and water

Protection for Fire Fighters:

Self-contained breathing apparatus and protective clothing should be worn in fires involving this material

Products of Combustion:

Carbon monoxide, carbon dioxide, silicon dioxide, formaldehyde and metal oxides. The product contains polyacrylonitrile. If involved in combustion events, product can evolve trace amounts of; NH₃ (ammonia), HCN (hydrogen cyanide), and monomeric acrylonitrile.

Unusual Fire Hazards:

Product is a super-insulation material. Rolls of material can retain heat within internal layers causing re-ignition in the presence of oxygen if heat is not removed.

Sensitive to Mechanical Impact:

Not expected

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Use personal protective equipment recommended in section 8. Minimize dust generation.

Environmental Precautions:

This material will not biodegrade

Methods for Clean-Up:

Wipe or scrape up material and place in container for disposal
Use absorbent to remove any residues
Dry vacuuming is the preferred method of cleaning up dust

Section 7: HANDLING AND STORAGE

Handling:

Use personal protective equipment recommended in section 8.
Minimize dust generation. Ensure adequate ventilation.
Dust released during the handling of thermal insulation should be cleaned up promptly. Dry vacuuming is the preferred method of picking up dust. Because dust is hydrophobic, water is not effective as a dust control agent.

Storage:

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Store material in original packaging away from excess heat
 Store away from strong acids, strong bases and strong oxidizing materials

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name:	OSHA PEL:		ACGIH TLV:	
Hazardous:				
Silica, Amorphous (total dust)	15	mg/m3	10	mg/m3
Silica, Amorphous (respirable fraction)	5	mg/m3	3	mg/m3

There are no exposure limits identified for the main product component, classified as synthetic amorphous silica. Exposure limits for synthetic amorphous silica are based on silica (CAS No. 7631-86-9).

Eye / Face Protection:

Wear safety glasses (minimum required).

Skin Protection:

Wear suitable disposable gloves.

Respiratory Protection:

Wear a NIOSH approved air-purifying respirator if exposure levels may be exceeded.

General Hygiene Considerations:

Wash thoroughly after handling material prior to eating, drinking or smoking. Wash clothing if dusty conditions present.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	Red on black fabric
Odor (threshold):	nil (not determined)
Physical State:	Solid
Appearance:	red silicone rubber on black fabric
Melting Point, °C (°F):	not applicable
Boiling Point, °C (°F):	not applicable
Flash Point, °C (°F):	not determined
Evaporation Rate (BuAc = 1):	not determined
Vapor Pressure, mm Hg:	not determined
Vapor Density (Air = 1.0):	not determined
Solubility in Water:	nil
Reactivity with Water:	nil
Specific Gravity:	not determined

Note: The above information is not intended for use in preparing product specifications. Contact Arlon before writing specifications

Section 10: STABILITY AND REACTIVITY

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Stability:

Material is stable.

Conditions to Avoid:

None known

Incompatible Materials:

None known

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, silicon dioxide, formaldehyde and metal oxides. The product contains polyacrylonitrile.

Hazardous Polymerization:

Will not occur

Section 11: TOXICOLOGY INFORMATION

Toxicology Information for Product:

Toxicological testing has not been conducted by Arlon on this material

Product may form formaldehyde (potential carcinogen) and formic acid if heated in air above 149°C (300°F). A formaldehyde MSDS is available from Arlon upon request.

Toxicology Information for Components:

Product contains a proprietary opacifier whose elemental components include copper and manganese. The final product contains less than 1% of each of these elements. According to the manufacturer of the opacifier, there is no specific exposure limit for this material. Based on the percentage of these elements in the final product, the applicable amorphous silica exposure limit would be exceeded before the copper compounds and manganese compounds exposure limits would be exceeded.

Section 12: ECOLOGICAL INFORMATION

Ecological Information on Product:

Ecological testing has not been conducted by Arlon on this material

Persistence / Degradability:

This material will not biodegrade

Bioaccumulation:

This material is non-water soluble, if ingested it is not expected to be absorbed

Ecological Information on Components:

Aquatic Toxicity*

Synthetic Amorphous Silica:

Fish: LC50 > 10,000 mg/L (Brachydanio rerio: 96 hour), Method OECD 203

Daphnia magna: EC50 > 10,000 mg/L (24 hours), Method OECD 202

* Ecological information is based on literature review for synthetic amorphous silica (CAS No. 7631-86-9)

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Section 13: DISPOSAL CONSIDERATIONS

Disposal:

Consult federal, state and local regulations to determine appropriate disposal options.

Section 14: TRANSPORTATION INFORMATION

Schedule B (Description of Commodity):

As supplied: 4008.11.0000

Section 15: REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazardous Communication Standard 29 CFR 1900.1200.

Global Inventories:

TSCA: United States Yes

SARA Title III Chemical Listings:

Section 302: Extremely Hazardous Substance: None Known

Section 304: CERCLA Hazardous Substances: None Known

Section 311 / 312 Hazard Class:

Acute: No
Chronic: No
Fire: No
Pressure: No
Reactive: No

Section 313: Toxic Chemicals:

Copper 1%
Manganese 1%

Supplemental State Compliance Information:

California Proposition 65:

Warning: This product, or one of its components, is listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Massachusetts:

Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

New Jersey:

Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

Pennsylvania:

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Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

Kentucky:

Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

Minnesota:

Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

North Carolina:

Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

Oregon:

Chemical Name:	CAS Number:	% by Weight:
Silica, Amorphous	7631-86-9	50 – 70

WHIMS Ingredient Disclosure List: Amorphous Silica (CAS No. 7631-86-9) I listed at a concentration threshold of 1%.

Section 16: OTHER INFORMATION

Legend:

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DOT	Department of Transportation
DSL	Domestic Substances List
EINCS	European Inventory of Existing Chemical Substances
ENCS	Existing and New Chemical Substances
EPA	Environmental Protection Agency
IARC	International Agency of Research on Cancer
LD50	Lethal Dose expected to kill 50% of population
LC50	Lethal Concentration expected to kill 50% of population
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
WHMIS	Workplace Hazardous Materials Information System
CFR	Code of Federal Regulations
	Title 29: OSHA Regulations
	Title 40: EPA Regulations
	Title 49: DOT Regulations

Prepared by:

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Arlon - Silicone Technologies Division

These data are offered in good faith as typical values and not as product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user shall review these recommendations in the specific context of the intended use and determine whether they are appropriate.