SAFETY DATA SHEET

Dare of Issue: 01/01/2023

AEROFLEX®with SaniGuard™

1. PRODUCT AND COMPANY IDENTIFICATION

Identification of Product:	Closed Cell EPDM Thermal Insulation
Trade Name:	AEROFLEX® with SaniGuard™
Manufacturer/Supplier:	Aeroflex USA, Inc.
Telephone Number:	282 Industrial Park Road, Sweetwater, TN 37874 Toll Free 1-866-237-6235
Emergency Phone Number:	ChemTel, Inc. 1-800-255-3924 (North America) 1-813-248-0585 (International)

2. HAZARD IDENTIFICATION

Insulation

Inhalation

No significant signs of any adverse health hazard are expected to occur as a result of inhalation exposure

Eye Contact

No significant signs of any adverse health hazards are expected to occur as a result of eye contact

Ingestion

Practically non-toxic

Skin Contact

No Significant signs of any adverse health hazards are expected to occur as a result of skin contact

PCV Jacket

EMERGENCY OVERVIEW

THIS MIXTURE HAS NOT BEEN EVALUATED AS A WHOLE. ALL INGREDIENTS ARE BOUND AND POTENTIAL FOR HAZARDOUS EXPOSURE AS SHIPPED IS MINIMAL. HOWEVER, SOME VAPORS MAY BE RELEASED UPON HEATING OR PROCESSING. THE END-USER (FABRICATOR) MUST TAKE THE NECESSARY PRECAUTIONS (MECHANICAL VENTILATION, RESPIRATORY PROTECTION, ETC.) TO PROTECT EMPLOYEES FROM EXPOSURE. SEE SECTIONS 8 AND 11 FOR SPECIAL PRECAUTIONS. MAY EMIT HYDROGEN CHLORIDE (HCL) OR CARBON MONOXIDE (CO) UNDER FIRE CONDITIONS.

POTENTIAL HEALTH EFFECTS

ROUTES OF EXPOSURE: Inhalation, ingestion, skin contact.

ACUTE EXPOSURE:

INHALATION: Resin particles, like other inert materials, can be mechanically irritating.

INGESTION: May be harmful if swallowed.

EYES: Resin particles, like other inert materials, are mechanically irritating to eyes.

SKIN: Experience shows no unusual dermatitis hazard from routine handling.

CHRONIC EXPOSURE: Refer to Section 11 for Toxicological Information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Insulation

Health Hazardous Components

Elastomeric thermal insulation is an expanded, closed cell, cross-linked rubber compound. They contain synthetic polymers, fillers, plasticizers and rubber chemicals. Since all of these material are bound in a polymer matrix, the product does not qualify as a hazardous material as defined by OSHA (29 CFR 1910.1200).

Following are the main ingredients in this product:

Synthetic rubber (EPDM: Ethylene-Propylene-Terpolymer Rubber) CAS No. 25038-36-2

Aluminum Trihydrate CAS No. 21645-51-2

Carbon Black CAS No. 1333-86-4

PCV Jacket

Components	CAS-No.	Weight percent
8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 10-ethyl-4,4-dimethyl-7-oxo-, 2-ethylhexyl ester	57583-35-4	1 - 5
Stannane, methyltris(2-ethylhexyloxycarbonylmethylthio)-	57583-34-3	1 - 5
Calcium stearate	1592-23-0	1 - 5
Paraffin waxes and Hydrocarbon waxes	8002-74-2	1 - 5
Calcium carbonate	471-34-1	5 - 10

4. FIRST AID MEASURES

Insulation

Inhalation	Not required under normal use. If irritation persists, remove from exposure area
Eye Contact	No required under normal use. Flush with water until all traces of the material are done. Seek medical attention if irritation persists
Ingestion	If illness or adverse symptoms develop, obtain medical attention
Skin Contact	Not required under normal use

PVC Jacket

Inhalation	Move to fresh air in case of accident inhalation of fums from overheating or combusion. When sysmtoms persist or in case od dount seek medical advice.
Eye Contact	Rinse immediately with plenty of wter, also under the eyelids, afir at least 15 minites. If eye irritation persists. seek medical advice.
Ingestion	Do not induce vomits withour medical advice. When sysmtoms persist or in all cases of doubt seek medical advice.
Skin Contact	Wash off with soap and planty of water. If skin irritation persists seek medical attention.

5. FIRE-FIGHTING MEASURES

Insulation

Extinguishing Media

Carbon Dioxide, ABC dry chemical, Water spray and foam

Specific Hazards with regard to Fire-Fighting measures

Approach from upwind side. Avoid breathing smoke, fumes or vapors on downwind side.

Firefighters wear protective clothing, especially eye protection, and self contained breathing apparatus

Hazardous Combustion Products

Material is stable under normal conditions. In the event of a prolonged fire, may generate Carbon Monoxide,

Carbon Dioxide, Low molecular weight alcohol/aldehydes and acid.

PVC Jacket

FLASH POINT: Not applicable.
FLAMMABLE LIMITS:
UPPER EXPLOSION LIMIT: Not applicable. **LOWER EXPLOSION LIMIT**: Not applicable.
AUTOIGNITION TEMPERATURE: Not applicable.
SUITABLE EXTINGUISHING MEDIA: Carbon dioxide blanket, water spray, dry powder, foam.
SPECIAL FIRE FIGHTING PROCEDURES: Full face self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.
UNUSUAL FIRE/EXPLOSION HAZARDS: May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.

6. ACCIDENTAL RELEASE MEASURES

Insulation

If materials released/Spill	
Land Spill	Collect spilled material and place it in an appropriate container for reuse or disposal
Water Spill	Product is insoluble. Collect spilled material and place in an appropriate container for reuse or disposal
Neutralizing Agent	Negligible

PVC Jacket

ENVIRONMENTAL PRECAUTIONS: Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.

METHODS FOR CLEANING UP: Clean up promptly by sweeping or vacuuming. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 13 of this SDS for proper disposal methods.

7. HANDLING AND STORAGE

Handling Condition	No special precaution required
Storage Condition	Keep in dry normal storage

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Controls General ventilation

Personal Protection Negligible

GENERAL HYGIENE CONSIDERATIONS (PVC Jacket): Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. This product may contain residual vinyl chloride monomer (VCM) (CAS number 75-01-4) below 8.5 ppm (0.00085%). It is unlikely, under normal working conditions with adequate ventilation, that the exposure limits will be exceeded for residual VCM. However, the user should take the necessary precautions (e.g. mechanical ventilation, local exhaust ventilation, air-monitoring, respiratory protection, etc.) to ensure airborne levels of any vapors including VCM or dusts that may be released during heating or processing are below regulated levels.

ENGINEERING MEASURES: Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.

Components	Value	Exposure Time	Exposure Type	List:
Calcium stearate	10 mg/m3	Time Weighted Average (TWA):		ACGIH
Calcium carbonate	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	OSHA Z1A
	15 mg/m3	Time Weighted Average (TWA):	Total dust.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):		MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):		MX OEL
	5 mg/m3	Recommended exposure limit (REL):	Respirable.	NIOSH
	10 mg/m3	Recommended exposure limit (REL):	Total	NIOSH
Paraffin waxes and Hydrocarbon waxes	2 mg/m3	Time Weighted Average (TWA):	Fume.	ACGIH
	2 mg/m3	Recommended exposure limit (REL):	Fume.	NIOSH
	2 mg/m3	Time Weighted Average (TWA):	Fume.	OSHA Z1A
	2 mg/m3	Time Weighted Average (TWA):	Fume.	MX OEL
	6 mg/m3	Short Term Exposure Limit (STEL):	Fume.	MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Insulation

Appearance:

Specific Gravity (H_2O=1) Expanded Foam Rubber 0.04-0.06

Service Temperature -297°F to 257°F (-182°C to +125°C)

Thermal Conductivity 0.245 BTU.in/ft2.hr.°F at Mean temp 75°F

Water Absorption 0.2% by volume Max

Water Vapor Permeability 0.03 Perm-inch (4.35 x 10-11 g/Pa.m.s)

Weather and UV resistance Minimal Cracking

Flammability Self-extinguishing

PVC Jacket

FORM Solid

APPEARANCE Thin sheet

COLOUR No pigment

ODOR Very faint

MELTING POINT/RANGE Not determined

BOILING POINT Not applicable

WATER SOLUBILITY Insoluble

EVAPORATION RATE Not applicable

SPECIFIC GRAVITY	Not determined
BULK DENSITY	Not established
VAPOUR PRESSURE	Not applicable.
VAPOUR DENSITY	Not applicable
PH	Not applicable

10. STABILITY AND REACTIVITY

Insulation

Stability and Reaction	Stable
Conditions to avoid	Negligible
	May generate Carbon Monoxide, Carbon Dioxide, Low molecular weight alcohol/aldehydes and acid
Hazardous Polymerization	Will not occur

PVC Jacket

Stability	Stable
Hazardous Polymerization	Will not occur
Conditions to avoid	Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.
Incompatible Materials	Incompatible with strong acids and oxidizing agents. Avoid contact with acetal homopolymers and acetal copolymers during processing.
Hazardous Decomposition Product	Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. Prolonged heating (approximately 30 minutes or more) above 392°F (200°C) or short term heating at 482°F (250°C) may result in product decomposition and evolution of carbon monoxide and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Insulation No Data

PVC Jacket

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on exiting health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the flowing characteristics:

CAS-No.	Che	Effect	Target Organ
57583-35-4	8-Oxa-3,5-dithia-4- stannatetradecanoic acid, 10-ethyl-4,4-dimethyl-7-oxo-, 2- ethylhexyl ester	Irritant	Eyes, skin.
57583-34-3	Stannane, methyltris(2- ethylhexyloxycarbonylmet hylthio)-	Irritant	Eyes, skin.
8002-74-2	Paraffin waxes and Hydrocarbon waxes	Systemic effects	Eyes, skin, respiratory
471-34-1	Calcium carbonate	Irritant	Eyes, Skin.

LC50 / LD50

This product contains the following components which in their pure form have the flowing characteristics:

CAS-No.	Chemical Name	Route	Value	Species
57583-34-3	Stannane, methyltris(2- ethylhexyloxycarbonylmethyl thio)-	Oral LD50	920 mg/kg	rat
1592-23-0	Calcium stearate	Oral LD50	> 10 gm/kg	rat
8002-74-2	Paraffin waxes and Hydrocarbon waxes	Oral LD50	> 2,000	rat
471-34-1	Calcium carbonate	Oral LD50	6,450 mg/kg	rat, mouse

12. ECOLOGICAL INFORMATION

Insulation No Data

PVC Jacket

PERSISTENCE AND DEGRADABILITY: Not readily biodegradable.
ENVIRONMENTAL TOXICITY: Adverse ecological impact is not known or expected under normal use.
BIOACCUMULATION POTENTIAL: No data available.
ADDITIONAL ADVICE: Not applicable.

13. DISPOSAL CONSIDERATION

Insulation

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet federal, state, and local environmental regulation.

PVC Jacket

PRODUCT: Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.
CONTAMINATED PACKAGING: Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.

14. TRANSPORT INFORMATION

Insulation No Data

PVC Jacket

U.S. DOT CLASSIFICATION: Not regulated for transportation.
ICAO/IATA: Not regulated for transportation.
IMO/IMDG (MARITIME): Not regulated for transportation.

15. REGULATORY INFORMATION

Insulation No Data

PVC Jacket

REGULATORY INFORMATION US REGULATIONS:
OSHA STATUS: Classified as hazardous based on components.
TSCA STATUS: All components of this product are listed on or exempt from the TSCA Inventory.
US. EPA CERCLA HAZARDOUS SUBSTANCES (40 CFR 302): Not applicable.
CALIFORNIA PROPOSITION 65: Not applicable.
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE:
Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation.
SARA TITLE III SECTION 313 TOXIC CHEMICALS:
Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation
CANADIAN REGULATIONS:
NATIONAL POLLUTANT RELEASE INVENTORY (NPRI): Not applicable.
WHMIS CLASSIFICATION: D2B.
WHMIS INGREDIENT DISCLOSURE LIST: CAS-No.: 57583-34-3.
DSL: All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.
NATIONAL INVENTORIES:
AUSTRALIA AICS: Not determined.
CHINA IECS: Not determined.
EUROPE EINECS: Listed.
JAPAN ENCS: Not determined.
KOREA KECI: Not determined.
PHILIPPINES PICCS: Not determined.

16. OTHER INFORMATION

THE INFORMATION PROVIDED IN THIS SAFETY DATA SHEET IS CORRECT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF AT THE DATE OF ITS PUBLICATION. THE INFORMATION GIVEN IS DESIGNED ONLY AS A GUIDANCE FOR SAFE HANDLING, USE, PROCESSING, TORAGE, TRANSPORTATION, DISPOSAL AND RELEASE AND IS NOT TO BE CONSIDERED A WARRANTY OR QUALITY SPECIFICATION. THE INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS, UNLESS SPECIFIED IN THE TEXT.