

# MATERIAL SAFETY DATA SHEET

## Aeroflex / Aerocel Insulation

Prepared 12/04

Aeroflex USA, Inc.  
9051 Executive Park Drive  
Suite 400  
Knoxville, TN 37923  
Tel 865-690-5740  
Fax 865-690-5695

Manufactured in Sweetwater, TN  
USA

### I. PRODUCT IDENTIFICATION

Name: Aerocel. – EPDM Closed Cell Elastomeric Thermal

### II. CHEMICAL NAME

Ethylene – Propylene – Terpolymer Rubber blended compound

### III. PRODUCT CONTENT

This product is classified as an "article" according to title 29 of the Code of Federal Regulations, OSHA Part 1910. 1200c. They are formed to a specific shape or design during manufacture, has end use functions dependent upon their shape and design, and does not release any hazardous chemical under normal conditions of use.

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT/EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula: (C<sub>2</sub> H<sub>4</sub>)<sub>x</sub> (C<sub>3</sub> H<sub>7</sub>)<sub>y</sub>  
(Diene)<sub>z</sub>  
An appropriate container for reuse or disposal  
CAS No.: 25038-36-2

Aluminum Tryhydrate  
Chemical Name: Aluminum  
Tryhydrate/Aluminum Hydroxide  
Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula: Al (O H)<sub>3</sub>  
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace Black  
Chemical Family: High – Purity Colloidal  
Carbon  
Chemical Formula: C  
CAS No. 1333-86-4

### V. FIRE FIGHTING MEASURES

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:  
May generate Carbon Monoxide, Carbon Dioxide, low molecular weight alcohols, aldehydes and acids.

### VI. ACCIDENTAL RELEASE MEASURES

Steps if materials released/spilled:  
Land spill: Collect spilled material and place 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: N/A

### VII. HAZARDOUS IDENTIFICATION Health Hazards

Inhalation: No significant signs of any adverse health hazards 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.  
Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact.  
Ingestion: Practically non-toxic

### VIII. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposed area.  
Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists.  
Skin Contact: Not required under normal use.

Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### IX. DISPOSAL CONSIDERATION

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

### XI. OTHER INFORMATION

The information supplied herein is related to material specified and may not be valid if used in combination with other materials or processes. Further, the information contained here is believed to be reliable and based on correct state of our knowledge; however, no guarantees of any kind can be given as to its accuracy.

# MATERIAL SAFETY DATA SHEET

## Aeroflex / Aerocel-CG Insulation

Prepared 12/04

Aeroflex USA, Inc.  
9051 Executive Park Drive  
Suite 400  
Knoxville, TN 37923  
Tel 865-690-5740  
Fax 865-690-5695

Manufactured in Sweetwater, TN  
USA

### I. PRODUCT IDENTIFICATION

Name: Aerocel CG – EPDM Closed Cell Elastomeric Thermal

### II. CHEMICAL NAME

Ethylene – Propylene – Terpolymer Rubber blended compound

### III. PRODUCT CONTENT

This product is classified as an "article" according to title 29 of the Code of Federal Regulations, OSHA Part 1910. 1200c. They are formed to a specific shape or design during manufacture, has end use functions dependent upon their shape and design, and does not release any hazardous chemical under normal conditions of use.

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT/EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula: (C<sub>2</sub> H<sub>4</sub>)<sub>x</sub> (C<sub>3</sub> H<sub>7</sub>)<sub>y</sub>  
(Diene)<sub>z</sub>  
An appropriate container for reuse or disposal  
CAS No.: 25038-36-2

Aluminum Tryhydrate  
Chemical Name: Aluminum  
Tryhydrate/Aluminum Hydroxide  
Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula: Al (O H)<sub>3</sub>  
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace Black  
Chemical Family: High – Purity Colloidal  
Carbon  
Chemical Formula: C  
CAS No. 1333-86-4

### V. FIRE FIGHTING MEASURES

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:  
May generate Carbon Monoxide, Carbon Dioxide, low molecular weight alcohols, aldehydes and acids.

### VI. ACCIDENTAL RELEASE MEASURES

Steps if materials released/spilled:  
Land spill: Collect spilled material and place 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: N/A

### VII. HAZARDOUS IDENTIFICATION Health Hazards

Inhalation: No significant signs of any adverse health hazards 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.  
Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact.  
Ingestion: Practically non-toxic

### VIII. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposed area.  
Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists.  
Skin Contact: Not required under normal use.

Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### IX. DISPOSAL CONSIDERATION

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

### XI. OTHER INFORMATION

The information supplied herein is related to material specified and may not be valid if used in combination with other materials or processes. Further, the information contained here is believed to be reliable and based on correct state of our knowledge; however, no guarantees of any kind can be given as to its accuracy.

# Material Safety Data Sheet

## Aeroflex / Aerocoat Aerocel Coating

Prepared 12/04

Aeroflex USA, Inc.  
9051 Executive Park Drive  
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Tel 865-690-5740  
Fax 865-690-5695

Manufactured in Sweetwater, TN  
USA

### I. PRODUCT IDENTIFICATION

Aerocoat. Water based paint formulated with selected pure acrylic Emulsion mixed with other special chemicals.

### II. CHEMICAL NAME

Acrylic latex emulsion

### III. PHYSICAL HAZARD

Flash point: Non-combustible; Auto Ignition Temperature (oF): Not applicable; Lower Explosion Limit (vol %): Not applicable; Upper Explosion Limit (vol %): Not applicable; Self Ignition/Reactivity: Not applicable; Material can splatter above 100o C/212o F and Polymer film can burn. Condition to avoid: Temperature above 177o C/350o F; Hazard Polymerization; Will not occur. Hazard Decomposition Products: Carbon Monoxide, Carbon Dioxide and other common toxic vapor and gases of organic compounds degradation.

### IV. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formal Name: Titanium (IV) Oxide, Titania

Chemical Family: Inorganic Oxides

Chemical Formula: TiO<sub>2</sub>

CAS No.: 13463-67-7

Propylene Glycol – 1%

Chemical Formal Name: 1,2 – Propanediol

Chemical Family: Glycol

Chemical Formula: C<sub>3</sub>H<sub>8</sub>O<sub>2</sub>

CAS No.: 57-55-6

Pentabromodiphenyl Oxide – 4%

Chemical Formal Name:

Pentabromodiphenyl Oxide

Chemical Family: Polybrominated biphenyl oxides

Chemical Formula: C<sub>12</sub>H<sub>5</sub>Br<sub>5</sub>O

CAS No.: 32534-81-9

Antimony Pentoxide – 4%

Chemical Normal Name: Antimonic anhydride

Chemical Family Name: Inorganic Oxide

CAS No.: 1314-60-9

Inorganic Filler – 9%

Water – 22%

### V. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Not classified

Hazard Class: N/A

ID#: N/A

### VI. HAZARDOUS IDENTIFICATIONS

Harmful if swallowed. Causes irritation to eyes and may cause mild irritation to the respiratory tract. Prolonged inhalation may cause headache, nausea, dizziness and sanding dust may cause dust disease of the lungs. Prolonged skin contact may cause irritation.

### VII. FIRE FIGHTING MEASURES

Extinguishing Media: Water, CO<sub>2</sub>, dry chemical, halon or foam. Move containers from fire area if it can be done without risk. Water spray may be used to keep fire exposed containers cool.

### VIII. ACCIDENTAL RELEASE MEASURES

Personnel Precaution: Keep unnecessary and unprotected personnel from entering. Wear appropriate protective clothing and equipment. Provide exhaust ventilation to keep air contaminant concentration below current applicable safety and health standards in the mixing, application, curing areas and to remove sanding dusts of dried coating. Environmental Precaution: Try to prevent the material from entering drains or water courses. Dispose of material in accordance with all Federal, State and Local regulations. Spillages: Absorb with an inert material. Transfer into chemical waste container for disposal. Wash spill site after material pick-up is complete. Supply sufficient fresh air.

### IX. PERSONAL PROTECTIVE EQUIPMENT

Use suitable respirator when high concentration is present. Do not get into eyes. Use chemical safety goggles and/or full face shield where dusting or splashing of solution is possible. Maintain eye wash fountain and quick-drench facilities in work areas. To prevent any contact, wear appropriate protective clothing to prevent skin exposure.

### X. FIRST AID MEASURES

Inhalation: Remove to fresh air when exposed to excess concentrations of vapor. Get medical attention.

Eye Contact: Flush eyes with plenty of water for several minutes, occasionally lifting the upper and lower lids. Get medical aid.

Skin Contact: Flush skin with plenty of soap and water. Get medical aid if irritation develops or persists.

Ingestion: If swallowed, wash mouth thoroughly with plenty of water and give water or milk to drink. Get medical attention immediately. Never give an unconscious person anything to drink.

### XI. HANDLING AND STORAGE

Keep container closed. Store in a cool well-ventilated place below 100 degrees and keep from freezing. Do not reuse empty containers without commercial cleaning and reconditioning.

### XII. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Semi-gloss; Specific gravity: 1.15-1.30; Boiling Point: 212-374 degrees; Viscosity: (KU); 80-110 at 25oC; Solid Content (%): 40 min.; pH: 8-10; Drying Time (minutes): 30 max at 25o C; Vapor Density (air=1); Greater than 1; Evaporation Rate (Butyl Acetate); less than 1.

### XIII. OTHER INFORMATION

This information is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The user should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of them. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process is the responsibility of the user.

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

Name: AEROFLEX AEROSEAL CONTACT ADHESIVE  
Description: Solvent-dispersed synthetic rubber resin adhesive

## II. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Adhesive containing a flammable liquid (Hexane & Acetone)  
Hazard Class: 3 (Flammable Liquid) ID #: UN 1133 PG: II (AEROCEL Contact Adhesive)

Reportable Quantity (RQ): 6250 lb.

EMERGENCY ONLY CONTACT: CHEM-TEL 1-800-255-3924

III HMIS (0=minimal hazard; 4=severe hazard)

Health = 2 Flammability = 3 Reactivity = 0

## IV. PRODUCT CONTENT

This product contains chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. All components are on TSCA inventory. This Product does NOT contain asbestos or polychlorinated biphenyls.

## V. HAZARDOUS INGREDIENTS

INGREDIENT:	C.A.S. NO.	PERCENT	
Acetone	67-64-1	disocyanate	Phosphate
Toluene	108-88-3	Formal Name: Methylene Diphenyl	Chemical Name: Tri phosphate
Hexane	110-54-3	Diisocyanate	Formal Name: Tri phosphate
Synthetic Rubber	N/A	Chemical Formula: OCN-R-NCO	Chemical Family: Alkyl Phosphate
Phenolic Resin	25085-50-1	CAS No.: 9016-87-9	Chemical Formula: O-P-(OC <sub>3</sub> H <sub>3</sub> Cl) <sub>3</sub>
Rubber Curing Ingredients	1309-48-4		CAS No. 13674-84-5

## V. FIRE AND EXPLOSION HAZARDS

Rigid polyurethane is similar to other organic materials such as wood, wool or rubber, and can present unreasonable fire risks in certain misapplications when exposed to ignition sources in air. Once ignited, such fire can produce heat, smoke and irritating or toxic gases. Carbon dioxide, carbon monoxide, possible traces of hydrogen cyanide, halogen acids, and nitrogen oxides can be evolved under fire condition. Install conditions: Install Aerofix only after all welding, cutting or other hot work has been completed. If hot work must be done after Aerofix has been installed, the hot work trade personnel must be warned. Remove combustible material from the vicinity immediately below the work area. Post a fire guard equipped with a fire extinguisher during and for 30 minutes after hot operations. Stop work immediately if foam begins to smoke and remove material from the work area. Work should be carried out in a well ventilated area. Do not breathe fumes.

## VI. DISPOSAL CONSIDERATION

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

## VII. HAZARDOUS IDENTIFICATION

Inhalation: Dust exposure from Aerofix is very low; however, dust may cause irritation to upper respiratory tract. Eye contact: No significant signs of any adverse health hazards are expected to occur as a result of eye contact. Skin Contact: Essentially no-irritation to skin. Minor mechanical injury may occur. Ingestion: Practically non-toxic.

## VIII. FIRST AID MEASURES

Inhalation: Remove to fresh air if effects occur. If irritation persists, consult a physician.  
Ingestion: No adverse effects anticipated by this route except for the hazard of choking. Eye: Flush eyes with plenty of water for at least 5 minutes. Skin: Wash off in flowing water or shower.

## IX. DISPOSAL CONSIDERATION

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

## Aerocel / Aeroseal Contact Adhesive

Prepared 12/04

Aeroflex USA, Inc.  
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Manufactured in Sweetwater, TN  
USA

## X. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Expanded rubber foam. Specific gravity (H<sub>2</sub>O=1): 0.04-0.09; Service Temperature: -57 to +105 C (-70 to +220 F); Thermal Conductivity (W/mK): 0.040 at mean temp 40 C; Water vapor permeability: 0.10 perm-inch (0.15X10<sup>-12</sup>Kg/Pa s m); Water Absorption (% by weight): 5% by weight; Compression set: Excellent; Flammability: Self-extinguishing

## XI. FIRE-FIGHTING MEASURES

Extinguishing Media: Use water spray, foam, carbon dioxide or dry chemical extinguishers. Use self contained breathing apparatus for smoke protection and usual body protection.

## XII. HANDLING AND STORAGE

Storage: Potential risks associated with rigid polyurethane arise from dust, fire and toxic thermal decomposition products and may result from improper storage. Keep in cool dry and ventilated area. Handling: Keep work areas clean and remove settled dust.

## XIII. PHYSICAL HAZARD

Flash Point: N/A, Auto Ignition Temperature: 650-800 F (343-427 C); Flammable Limits (STP): N/A, toxic fumes are released in fire situations, Stability: Stable under recommended storage conditions, Polymerization: Will not occur.

## XIV. OTHER INFORMATION

The information supplied herein is related to material specified and may not be valid if used in combination with other materials or processes. Further, the information contained here is believed to be reliable and based on correct state of our knowledge; however, no guarantees of any kind can be given as to its accuracy.

# MATERIAL SAFETY DATA SHEET

## Aerocel / Aero Seal Contact Adhesive

Prepared 12/04

### I. PRODUCT IDENTIFICATION

Name: AEROFLEX AEROSEAL CONTACT ADHESIVE  
Description: Solvent-dispersed synthetic rubber resin adhesive

### II. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Adhesive containing a flammable liquid (Hexane & Acetone)  
Hazard Class: 3 (Flammable Liquid) ID #: UN 1133 PG: II (AEROCEL Contact Adhesive)

Reportable Quantity (RQ): 6250 lb.

EMERGENCY ONLY CONTACT: CHEM-TEL 1-800-255-3924

### III HMIS (0=minimal hazard; 4=severe hazard)

Health = 2 Flammability = 3 Reactivity = 0

### IV. PRODUCT CONTENT

This product contains chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act Of 1986 and 40 CFR Part 372. All components are on TSCA inventory. This Product does NOT contain asbestos or polychlorinated biphenyls.

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USA

### V. HAZARDOUS INGREDIENTS

INGREDIENT:	C.A.S. NO.	PERCENT	OSHA PEL	ACGIH TLV
Acetone	67-64-1	25	750 ppm	500 ppm
Toluene	108-88-3	16	STEL: 1000 ppm 100 ppm	750 ppm 50 ppm
Hexane	110-54-3	34	STEL: 150 ppm 50 ppm	(skin) 50 ppm (skin)
Synthetic Rubber	N/A	13	N/K	N/K
Phenolic Resin	25085-50-1	9	N/K	N/K
Rubber Curing Ingredients	1309-48-4	3	N/K	N/K

### VI. PHYSICAL DATA

APPEARANCE AND COLOR: Straw colored liquid with characteristic solvent odor.  
BOILING POINT: (degrees F): >152. VAPOR PRESSURE (mm Hg @ 20 degrees C): 180. VAPOR DENSITY: (Air = 1): N/K. SOLUBILITY IN WATER: Negligible.  
SPECIFIC GRAVITY (H2O = 1): 0.83. PERCENT VOLATILE BY WEIGHT (30 min. @ 275 degrees F): 75. EVAPORATION RATE (Butyl Acetate = 1): N/K pH: N/A.  
VOC: 618 g/l calculated at 70 F/21 C, SCAQMD.

### VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: -4 degrees F based on Acetone (closed cup). FLAMMABLE RANGE: LEL = 1.1; UEL = 13.0 (based on Hexane and Acetone).  
EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, alcohol-type foam.  
SPECIAL FIRE FIGHTING PROCEDURES: Protect fire fighters from toxic products of combustion by wearing self-contained breathing apparatus. UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers in a fire may rupture due to pressure build-up; use water to cool containers to prevent this.

### VIII. HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: Inhalation and direct dermal exposure.  
TARGET ORGANS: Upper respiratory tract, skin and eyes. EFFECTS OF OVEREXPOSURE: Excessive skin contact may cause drying and cracking of skin, defatting of tissue, and result in dermatitis. Contact with eyes will cause irritation.  
INHALATION: May cause irritation of respiratory tract, coughing, and CNS effects such as headache, dizziness, drowsiness, nausea. CARCINOGENICITY: NTP: No. IARC Monographs: No OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Any condition generally aggravated by solvents, preexisting upper respiratory and lung disease such as, but not limited to bronchitis, emphysema, and asthma. FIRST AID PROCEDURES: Flush any skin or eye contact with plenty of water. Refer to physician if irritation or symptoms persists. INHALATION: Remove to fresh air if exposed to excess concentrations of vapor. Seek medical attention if symptoms persist. INGESTION: Do not induce vomiting. Call a Poison Control Center or physician for guidance.

### IX. REACTIVITY DATA

STABILITY: Stable. INCOMPATIBILITY: Strong oxidizing agents. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and other toxic vapors and gases that are common to thermal degradation of organic compounds. HAZARDOUS POLYMERIZATION: Will not occur.

### X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Ventilate area of spill or leak; if using mechanical ventilation, make sure that it is explosion-proof or does not present an ignition source. For exposures above TLV, wear approved respiratory equipment. Contain spill and prevent it from entering sewer lines or waterways. Use absorbent to assist with the pick-up of material. Scrape up adhesive and place in container. WASTE DISPOSAL METHOD: Dispose of container and any unused contents in

accordance with Federal, State and Local Waste Disposal Regulations. Do not flush unused contents of residue down drains. Do not reuse container.

### XI. SPECIAL HANDLING AND USE INFORMATION

VENTILATION: extremely flammable vapors may ignite explosively or cause flash fire. Use natural cross-ventilation, local (mechanical) pick-up, and/or general area (mechanical) ventilation to prevent an accumulation of solvent vapors, keeping in mind that the ventilation pattern must remove the heavier-than-air solvent vapors from the lower levels of the work spaces. The ventilation should be sufficient to keep the solvent vapor concentration below the TLV. RESPIRATORY PROTECTION: With adequate ventilation, respiratory equipment should not be needed. IF adequate ventilation is not afforded, wear respiratory equipment approved for organic vapors. SKIN AND EYE PROTECTION: During the manufacture and packaging of this product, impervious gloves, eye protection and eye wash facilities may be appropriate. During normal end-product use, cotton or loop-pile gloves with spectacle type safety glasses are recommended to prevent contact with this mastic product.

### XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in an area suitable for flammable mixtures. Recommended storage temperature is below 90 degrees F. OTHER PRECAUTIONS: Vapors are flammable and are heavier than air. Prohibit smoking and eliminate all other sources of ignition, such as regular electrical tools and appliances, making sure that pilots on gas-fired water heaters are extinguished. Warning: This product contains toluene, a chemical known to the state of California to cause birth defects or other reproductive harm. WORK SITE ENVIRONMENT: Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Therefore you should advise the building manager or other appropriate person that it will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other part of the building and persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

# Material Safety Data Sheet

## Aeroflex / Aerotape Aerocel Foam Tape

Prepared 12/04

### I. PRODUCT IDENTIFICATION

Elastomeric closed cell self-adhesive tape.

### II. CHEMICAL NAME

Ethylene-Propylene-Terpolymer Rubber blended compound with Acrylic Pressure sensitive adhesive

### III. COMPOSITION / INFORMATION ON INGREDIENTS

This product is an expanded, closed cell, cross-linked rubber compound. It contains synthetic polymers, fillers, plasticizers and rubber chemicals. Since all of these materials are bound in a polymer matrix, this product does not qualify as a hazardous material as defined by OSHA (29 CFR 1910.1200). Pressure sensitive coating is a synthetic rubber based adhesive with a paper release liner and is classified as an article which is non hazardous as defined by OSHA (29 CFR 1910.1200). Following are the main ingredients on this product.

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Manufactured in Sweetwater, TN  
USA

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT/EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula: (C<sub>2</sub>H<sub>4</sub>)<sub>x</sub> (C<sub>3</sub>H<sub>7</sub>)<sub>y</sub> (Diene)<sub>z</sub>  
CAS No.: 25038-36-2

Aluminum Trihydrate  
Chemical Name: Aluminum Trihydrate /  
Aluminum Hydroxide

Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula: Al (O H)<sub>3</sub>  
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace black  
Chemical Family: High-Purity Colloidal  
Carbon  
Chemical Formula: C

CAS No.: 1333-86-4

Adhesive  
Chemical Name: Acrylic Polymer  
Formal Name: Acrylic pressure sensitive  
adhesive  
Chemical Family: Copolymers of acrylic acid,  
methacrylic acid, ester of these acid  
Chemical Formula: (C<sub>5</sub>H<sub>8</sub> X)<sub>n</sub>  
CAS No.: 9011-14-7

### V. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Not regulated  
Hazard Class: N/A  
ID#: N/A

### VI. HAZARDOUS IDENTIFICATIONS

Inhalation: No significant signs of any adverse health hazards 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. Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact. Ingestion: Practically non-toxic

### VII. FIRE FIGHTING MEASURES

Extinguishing: Carbon dioxide, ABC dry chemical, water spray and foam. Specific hazards with regard to Firefighting measures: Approach from upwind side. Avoid breathing smoke fumes or vapors on down-wind side. Firefighters wear protective clothing, especially eye protection, and self-contained breathing apparatus. Hazardous Combustion Products: May generate carbon monoxide, carbon dioxide low molecular weight alcohols, aldehydes and acids.

### VIII. ACCIDENTAL RELEASE MEASURES

If material 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 it in an appropriate container for reuse or disposal. Neutralizing Agent: N/A

### IX. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: General ventilation. Personal Protection: N/A

### X. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposure area. Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists. Skin Contact: Not required under normal use. Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### XI. HANDLING AND STORAGE

Keep in a cool dry place. Rotate stock. Do not breathe decomposed products.

### XII. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Expanded rubber foam with pressure sensitive adhesive. Specific Gravity (H<sub>2</sub>O=1): 0.13-0.16 Water Absorption: 5% by weight Service Temperature: -29 to +93 C (-20 to +200 F) Thermal Conductivity: 0.050 W/mK (0.26 Btu in/ft<sup>2</sup> hr F) at 24 degrees C (75 F) Flammability: Self extinguishing Soluble in Water: Insoluble

### XIII. STABILITY AND REACTIVITY

Stable. Conditions to Avoid: N/A Hazardous Decomposition Product: May generate carbon monoxide, carbon dioxide, low molecular weight alcohols, aldehydes and acids. Hazardous Polymerization: Will not occur.

### XIV. DISPOSAL CONSIDERATIONS

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

### XV. OTHER INFORMATION

This information is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The user should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of them. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process is the responsibility of the user.

# Material Safety Data Sheet

## Aeroflex / Everseal Cork Tape

Prepared 12/04

Aeroflex USA, Inc.  
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Suite 400  
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Tel 865-690-5740  
Fax 865-690-5695

Manufactured in Sweetwater, TN  
USA

### I. PRODUCT IDENTIFICATION

Everseal. Pipe Insulating Cork Tape

### II. CHEMICAL NAME

Polymer based material containing rubbers, asphalt and cork.

### III. HEALTH AND HAZARD INFORMATION

This product is a thermal insulation mastic tape which consists of cork, rubber asphalts, filler, plasticizers and rubber chemicals. Since all of these materials are bound in polymer matrix form a soft solid mastic tape material, this product does not release any hazardous chemical materials under normal condition of use.

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Natural Rubber Formal Name: NR/ Natural Rubber Chemical Name: Polysoprene CAS No.: 78-79-5	Chemical Family: Chlorinated Isobutylene Isoprene Copolymer CAS No.: 68081-82-3	Viscose Material Formal Name: Asphalt Chemical Family: Aromatic Substances
Synthetic Rubber Formal Name: CIIR/Halogenated Butyl Rubber	Insulation Material Formal Name: Granulated Cork Chemical Family: Natural Cork CAS No.: Not Applicable	Filler/additive Formal Name: Calcium Carbonate Chemical Family: Precipitate Calcium Carbonate CAS No.: 471-34-1

### V. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Not regulated  
Hazard Class: N/A  
ID#: N/A

### VI. HAZARD IDENTIFICATIONS AND FIRST AID PROCEDURES

Eye Contact: No significant signs of any adverse health hazards are expected to occur as a result of eye contact. If contacted to the eyes, flush with clean water or normal saline until irritation lessens. Seek medical attention if irritation persists. Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact. In case of skin contact, remove any contaminated items and wash skin with soap and water. Inhalation: Not required under normal use. If irritation persists, remove from exposure area. Ingestion: This product is in all practicality non-toxic.

### VII. FIRE FIGHTING MEASURES

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. Fire fighters wear protective clothing, especially eye protection, and self-contained breathing apparatus. Hazardous Combustion Products: May generate carbon monoxide, carbon dioxide, low molecular weight alcohols, aldehydes and acids.

### VIII. PHYSICAL DATA

Solid Contents: 99.8%  
Color: Black  
Odor: Slight Odor  
Thermal Conductivity: 0.60 BTU/hr/ft<sup>2</sup>/F/in at 75°F  
Moisture/Vapor Transmission: 0.02 perms. (ASTM E-96 Procedure C)  
Water Absorption: 0.01% by volume (ASTM D-1056)  
Ozone Resistance: Good  
Service Temperature: -20F (-29C) to +200F (+93C)

### IX. HANDLING AND STORAGE

Keep in cool dry place

### X. REACTIVITY

This product is stable and will not react with water. Hazardous polymerization will not occur

### XI. ENVIRONMENTAL INFORMATION

Disposal method, store residues in container and take to an approved waste disposal site. Dispose of residues in accordance with applicable waste management regulations.

### XII. OTHER INFORMATION

The information supplied herein is related to the material specified and may not be valid if used in combination with other material or process. Further, the information contained here is believed to be reliable and based on correct state of our knowledge. However, no guarantees of any kind can be given as to its accuracy.

# Material Safety Data Sheet

## Aeroflex / Escotape Self Adhesive Foam Tape

Prepared 12/04

### I. PRODUCT IDENTIFICATION

Elastomeric closed cell self adhesive foam tape.

### II. CHEMICAL NAME

Ethylene-Propylene-Terpolymer Rubber blended compound with acrylic pressure sensitive adhesive

### III. COMPOSITION / INFORMATION ON INGREDIENTS

This product is an expanded, closed cell, cross-linked rubber compound. It contains synthetic polymers, fillers, plasticizers and rubber chemicals. Since all of these materials are bound in a polymer matrix, this product does not qualify as a hazardous material as defined by OSHA (29 CFR 1910.1200). Pressure sensitive coating is a synthetic rubber based adhesive with a paper release liner and is classified as an article which is non hazardous as defined by OSHA (29 CFR 1910.1200). Following are the main ingredients on this product.

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USA

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT/EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula: (C<sub>2</sub>H<sub>4</sub>)<sub>x</sub> (C<sub>3</sub>H<sub>7</sub>)<sub>y</sub> (Diene)<sub>z</sub>  
CAS No.: 25038-36-2

Aluminum Trihydrate  
Chemical Name: Aluminum Trihydrate /  
Aluminum Hydroxide

Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula: Al (O H)<sub>3</sub>  
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace black  
Chemical Family: High-Purity Colloidal  
Carbon  
Chemical Formula: C

CAS No.: 1333-86-4

Adhesive  
Chemical Name: Acrylic Polymer  
Formal Name: Acrylic pressure sensitive  
adhesive  
Chemical Family: Copolymers of acrylic acid,  
methacrylic acid, ester of these acid  
Chemical Formula: (C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>)<sub>n</sub>  
CAS No.: 9011-14-7

### V. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Not regulated  
Hazard Class: N/A  
ID#: N/A

### VI. HAZARDOUS IDENTIFICATIONS

Inhalation: No significant signs of any adverse health hazards 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. Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact. Ingestion: Practically non-toxic

### VII. FIRE FIGHTING MEASURES

Extinguishing: Carbon dioxide, ABC dry chemical, water spray and foam. Specific hazards with regard to firefighting measures: Approach from upwind side. Avoid breathing smoke fumes or vapors on down-wind side. Firefighters wear protective clothing, especially eye protection, and self-contained breathing apparatus. Hazardous Combustion Products: May generate carbon monoxide, carbon dioxide low molecular weight alcohols, aldehydes and acids.

### VIII. ACCIDENTAL RELEASE MEASURES

If material 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 it in an appropriate container for reuse or disposal. Neutralizing Agent: N/A

### IX. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: General ventilation. Personal Protection: N/A

### X. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposure area. Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists. Skin Contact: Not required under normal use. Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### XI. HANDLING AND STORAGE

Keep in a cool dry place. Rotate stock. Do not breathe decomposed products.

### XII. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Expanded rubber foam with pressure sensitive adhesive. Specific Gravity (H<sub>2</sub>O=1): 0.13-0.16 Water Absorption: 5% by weight Service Temperature: -29 to +93 C (-20 to +200 F) Thermal Conductivity: 0.050 W/mK (0.26 Btu in/ft<sup>2</sup> hr F) at 24 degrees C (75 F) Flammability: Self extinguishing Soluble in Water: Insoluble

### XIII. STABILITY AND REACTIVITY

Stable. Conditions to Avoid: N/A Hazardous Decomposition Product: May generate carbon monoxide, carbon dioxide, low molecular weight alcohols, aldehydes and acids. Hazardous Polymerization: Will not occur.

### XIV. DISPOSAL CONSIDERATIONS

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

### XV. OTHER INFORMATION

The information supplied herein is related to the material specified and may not be valid if used in combination with other material or process. Further, the information contained here is believed to be reliable and based on correct state of our knowledge. However, no guarantees of any kind can be given to its accuracy.

# Material Safety Data Sheet

## Aeroflex / Protape Aerocel Self Adhesive Tape

Prepared 12/04

### I. PRODUCT IDENTIFICATION

Rubber Adhesive Tape

### II. CHEMICAL NAME

Ethylene-Propylene-Terpolymer rubber blended compound with Acrylic Pressure sensitive adhesive.

### III. COMPOSITION / INFORMATION ON INGREDIENTS

This product is a rubber type compound. It contains synthetic polymers, fillers, plasticizers and rubber chemicals. Since all of these materials are bound in a polymer matrix, this product does not qualify as a hazardous material as defined by OSHA (29 CFR 1910.1200). Pressure sensitive coating is a synthetic rubber based adhesive with a paper release liner and is classified as an article which is non hazardous as defined by OSHA (29 CFR 1910.1200).

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USA

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT/EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula: (C<sub>2</sub>H<sub>4</sub>)<sub>x</sub> (C<sub>3</sub>H<sub>7</sub>)<sub>y</sub>  
(Diene)<sub>z</sub>  
CAS No.: 25038-36-2

Aluminum Tryhydrate  
Chemical Name: Aluminum Trihydrate /  
Aluminum Hydroxide

Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula: Al (O H)<sub>3</sub>  
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace black  
Chemical Family: High-Purity Colloidal  
Carbon  
Chemical Formula: C

CAS No.: 1333-86-4

Adhesive  
Chemical Name: Acrylic Polymer  
Formal Name: Acrylic pressure sensitive  
adhesive  
Chemical Family: Copolymers of acrylic acid,  
methacrylic acid, ester of these acid  
Chemical Formula: (C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>)<sub>n</sub>  
CAS No.: 9011-14-7

### V. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Not regulated  
Hazard Class: N/A  
ID#: N/A

### VI. HAZARDOUS IDENTIFICATIONS

Inhalation: No significant signs of any adverse health hazards 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. Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact. Ingestion: Practically non-toxic

### VII. FIRE FIGHTING MEASURES

Extinguishing: Carbon dioxide, ABC dry chemical, water spray and foam. Specific hazards with regard to firefighting measures: Approach from upwind side. Avoid breathing smoke fumes or vapors on down-wind side. Firefighters wear protective clothing, especially eye protection, and self-contained breathing apparatus. Hazardous Combustion Products: May generate carbon monoxide, carbon dioxide low molecular weight alcohols, aldehydes and acids.

### VIII. ACCIDENTAL RELEASE MEASURES

If material 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 it in an appropriate container for reuse or disposal. Neutralizing Agent: N/A

### IX. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: General ventilation. Personal Protection: N/A

### X. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposure area. Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists. Skin Contact: Not required under normal use. Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### XI. HANDLING AND STORAGE

Keep in a cool dry place. Rotate stock. Do not breathe decomposed products.

### XII. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Rubber tape with pressure sensitive adhesive. Tensile Strength: 2.5 N/mm<sup>2</sup> min. Specific Gravity (H<sub>2</sub>O=1): 0.13-0.16 Water Absorption: 5% by weight Service Temperature: -29 to +93 C (-20 to +200 F) Thermal Conductivity: 0.050 W/mK (0.26 Btu in/ft<sup>2</sup> hr F) at 24 degrees C (75 F) Flammability: Self extinguishing Soluble in Water: Insoluble

### XIII. STABILITY AND REACTIVITY

Stable. Conditions to Avoid: N/A Hazardous Decomposition Product: May generate carbon monoxide, carbon dioxide, low molecular weight alcohols, aldehydes and acids. Hazardous Polymerization: Will not occur.

### XIV. DISPOSAL CONSIDERATIONS

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

### XV. OTHER INFORMATION

This information is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The user should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of them. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process is the responsibility of the user.

# MATERIAL SAFETY DATA SHEET

## Aeroflex / Aerocel - SSPT Insulation

Prepared 12/04

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USA

### I. PRODUCT IDENTIFICATION

Name: Aerocel – EPDM Closed Cell Elastomeric Thermal Insulation tube and sheet.

### II. CHEMICAL NAME

Ethylene-Propylene-Terpolymer Rubber blended compound

### III. PRODUCT CONTENT

This product is classified as an "article" according to title 29 of the Code of Federal Regulations, OSHA Part 29 CFR. 1200c. They are formed to a specific Shape or design during manufacture, has end use functions dependent upon their shape and design, and does not release any hazardous chemical under normal conditions of use.

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT / EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula: (C<sub>2</sub> H<sub>4</sub>)<sub>x</sub> (C<sub>3</sub> H<sub>7</sub>)<sub>y</sub> (Diene)<sub>z</sub>  
An appropriate container for reuse or disposal  
CAS No.: 25038-36-2

Aluminum Tryhydrate  
Chemical Name: Aluminum  
Tryhydrate/Aluminum Hydroxide  
Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula: Al (O H)<sub>3</sub>  
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace Black  
Chemical Family: High – Purity Colloidal  
Carbon  
Chemical Formula: C  
CAS No. 1333-86-4

### V. HEALTH HAZARD COMPONENTS

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

### VI. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Expanded rubber foam with self-sealing tape and protective rubber tape. Specific Gravity: (H<sub>2</sub>O=1); 0.04-1.09  
Temperature Range: (C): 0.037 W/m.k. at 24 degrees C  
Thermal Conductivity (W/m.k.): 0.036 at mean temp 0  
Water Absorption: (% by weight): 5% by weight  
Water Vapor Permeability: 0.10 Perm-inch (0.15x10<sup>-12</sup>Kg/Pasm)  
Temperature Range: -57 to 125 C (-70 to 254 F)  
Flammability: Self Extinguishing  
Solubility in Water: Insoluble

### VII. FIRE FIGHTING MEASURES

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 the downwind side. Firefighters wear protective clothing, especially eye protection and self contained breathing apparatus. Hazardous Combustion Products: May generate Carbon Monoxide, Carbon Dioxide, low molecular weight alcohols, aldehydes and acids.

### VIII. SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: N/A. Waste disposal method: Dispose of container and any unused contents in accordance with Federal, State and Local Waste Disposal regulations.

### IX. HAZARDOUS IDENTIFICATIONS Health Hazards

Inhalation: No significant signs of any adverse health hazards 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.  
Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact.  
Ingestion: Practically non-toxic.

### X. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposed area.  
Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists.  
Skin Contact: Not required under normal use.  
Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### XI. DISPOSAL CONSIDERATION

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State, and Local environmental regulations.

### XII. OTHER INFORMATION

The information supplied herein is related to material specified and may not be valid if used in combination with other materials or processes. Further, the information contained here is believed to be reliable and based on correct state of our knowledge; however, no guarantees of any kind can be given as to its accuracy.

# Material Safety Data Sheet

## Aeroflex / Aerocel Self Adhesive Sheet

Prepared 12/04

### I. PRODUCT IDENTIFICATION

Self adhesive closed cell elastomeric thermal insulation sheet.

### II. PRODUCT DESCRIPTION

This product is an expanded, closed cell, cross-linked rubber type compound. It contains synthetic polymer, fillers, plasticizers and rubber chemicals.

### III. HAZARDS IDENTIFICATION

Inhalation: No significant signs of any adverse health hazards 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

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USA

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT/EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula : $(C_2 H_4)_x (C_3 H_7)_y$   
(Diene) $_z$   
CAS No.: 25038-36-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace black  
Chemical Family: High-Purity Colloidal  
Carbon  
Chemical Formula: C

CAS No.: 1333-86-4

This product is coated with adhesive that contains Acryl co-polymer  
CAS No.: 25119-83-9

### V. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Not regulated  
Hazard Class: N/A  
ID#: N/A

### VI. FIRE FIGHTING MEASURES

Extinguishing media: Carbon Dioxide, dry chemical, water spray and foam. Specific hazards with regard to firefighting 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, and water evolved together with small quantities of other gases depending on the heat of the fire

### VII. ACCIDENTAL RELEASE MEASURES

If material 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 it in an appropriate container for reuse or disposal. Neutralizing Agent: N/A

### VIII. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: General ventilation. Personal Protection: N/A

### IX. FIRST AID MEASURES

Inhalation: Not required under normal use, any dust created when the material is cut would not be airborne. If irritation persists, remove from exposure area. Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists. Ingestion: If illness or adverse symptoms develop, obtain medical attention. Skin Contact: Not required under normal use.

### X. HANDLING AND STORAGE

No special precaution is required. Keep in a dry normal storage.

### XI. PHYSICAL AND CHEMICAL PROPERTIES

Elastomeric Insulation: Appearance: expanded rubber foam. Specific Gravity: 0.04-0.09. Service Temperature: -57 to 105 degrees C (-70 to + 221 F). Thermal Conductivity (W/mK): 0.037 at mean temp 24 degrees

C. Water Vapor Permeability: 0.08 Perm-inch (1 16X10 Kg/Pa s m).  
Water absorption (% by weight): 5% by weight. Compression Set: good  
Flammability: Self extinguishing. Adhesive: Appearance: Dry thin film.  
Specific Gravity: 0.94. Solubility in Water: Non soluble

### XII. STABILITY AND REACTIVITY

Stable under normal conditions. Conditions to avoid: N/A. Hazardous Decomposition product: May generate carbon monoxide, carbon dioxide and small quantity of other gases. Hazardous Polymerization: It will not occur.

### XIII. DISPOSAL CONSIDERATIONS

Waste material may be disposed of as normal industrial waste under conditions that meet Federal, State and Local environmental regulations.

### XIV. OTHER INFORMATION

The information supplied herein is related to material specified and may not be valid if used in combination with other material or process. Further the information contained here is believed to be reliable and based on the correct state of our knowledge. However, no guarantees of any kind can be given as to its accuracy.

# MATERIAL SAFETY DATA SHEET

## Aeroflex / Aerocel-WG Insulation

Prepared 12/04

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Manufactured in Sweetwater, TN  
USA

### I. PRODUCT IDENTIFICATION

Name: Aerocel – EPDM Closed Cell Elastomeric Thermal Insulation tube and sheet.

### II. CHEMICAL NAME

Ethylene-Propylene-Terpolymer Rubber blended compound

### III. PRODUCT CONTENT

This product is classified as an "article" according to title 29 of the Code of Federal Regulations, OSHA Part 29 CFR. 1200c. They are formed to a specific shape or design during manufacture, has end use functions dependent upon their shape and design, and does not release any hazardous chemical under normal conditions of use.

### IV. COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene-Propylene-Terpolymer  
Formal Name: EPT / EPDM  
Chemical Family: Synthetic Rubber  
Chemical Formula:  $(C_2 H_4)_x (C_3 H)_y (Diene)_z$   
An appropriate container for reuse or disposal  
CAS No.: 25038-36-2

Aluminum Tryhydrate  
Chemical Name: Aluminum  
Tryhydrate/Aluminum Hydroxide  
Formal Name: Aluminum Oxide Trihydrate  
Chemical Formula:  $Al (O H)_3$   
CAS No.: 21645-51-2

Carbon Black  
Chemical Name: Carbon black  
Formal Name: Furnace Black  
Chemical Family: High – Purity Colloidal  
Carbon  
Chemical Formula: C  
CAS No. 1333-86-4

### V. FIRE FIGHTING MEASURES

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:  
May generate Carbon Monoxide, Carbon Dioxide, low molecular weight alcohols, aldehydes and acids.

### VI. ACCIDENTAL RELEASE MEASURES

Steps if materials released/spilled:  
Land spill: Collect spilled material and place 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: N/A

### VII. HAZARDOUS IDENTIFICATION Health Hazards

Inhalation: No significant signs of any adverse health hazards 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.  
Skin Contact: No significant signs of any adverse health hazards are expected to occur as a result of skin contact.  
Ingestion: Practically non-toxic

### VIII. FIRST AID MEASURES

Inhalation: Not required under normal use. If irritation persists, remove from exposed area.  
Eye Contact: Not required under normal use. Flush with water until all traces of this material are gone. Seek medical attention if irritation persists.  
Skin Contact: Not required under normal use.  
Ingestion: If illness or adverse symptoms develop, obtain medical attention.

### IX. DISPOSAL CONSIDERATION

Waste material may be disposed of in an approved landfill or may be incinerated under conditions which meet Federal, State and local environmental regulations.

### X. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Expanded rubber foam. Specific gravity (H<sub>2</sub>O=1): 0.04-0.09; Service Temperature: -57 50 +105 C (-70 tp +220 F); Thermal Conductivity (W/mK): 0.040 at mean temp 40 C; Water vapor permeability: 0.10 perm-inch (0.15X10<sup>-12</sup>Kg/Pa s m); Water Absorption (% by weight): 5% by weight; Compression set: Excellent; Flammability: Self-extinguishing

### XI. OTHER INFORMATION

The information supplied herein is related to material specified and may not be valid if used in combination with other materials or processes. Further, the information contained here is believed to be reliable and based on correct state of our knowledge; however, no guarantees of any kind can be given as to its accuracy.