



AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 1 of 8

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product Name: AF Series Broadband Foam RF Absorbers
Product Identifier: 3PB Solutions PNs Leading with AF-####- where #### is the thickness in thousands of an inch. (i.e. #### = 1000 = 1.000")
Recommended Use: Carbon-loaded polyurethane foam radio frequency (RF) and microwave absorber. For commercial use only.
Supplier Name: 3PB Solutions LLC
Supplier Address: 8833 Production Avenue
San Diego, CA 92121
Supplier Phone: (855)785-5660
Emergency Phone: (800)424-9300 (24-hour line)
Issue Date: 9/1/2025
Supersedes Date: New issue

SECTION 2: Hazards Identification

Classification: No hazards present. This material is not classified as a hazardous material per the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), which is aligned with the OSHA Hazard Communication Standard (HCS).

Label Elements: Symbols:
None.

Signal Words:
None.

Hazard Statements:
None.

Precautionary Statements:
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray.
If inhaled high concentrations of airborne dust may irritate the respiratory tract.
If in eyes contact with airborne dust may cause irritation. Rinse cautiously with water.
If eye irritation persists remove contact lenses, if present and easy to do. Continue rinsing.
Store in a dry place.
In case of fire, use dry chemical, foam, or water spray for extinction.

Other Hazards: Dust from this product may be harmful if inhaled. Abrasion of particles may cause eye, skin, and respiratory tract irritation. Ingestion may cause gastric disturbances. High-heat processing may liberate toxic gases.

Eye Contact: Contact with dust may cause irritation to the eyes. Symptoms may include redness, watering, itching, or a burning sensation in the eyes.

Skin Contact: Contact with dust does not generally cause skin irritation.

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 2 of 8

Inhalation: High concentrations of airborne dust may irritate the respiratory tract, including the nose, throat, and lungs. Symptoms may include coughing, nausea, headaches, or dizziness.

Ingestion: Ingestion may cause irritation to the gastrointestinal tract but is unlikely to occur in industrial or commercial use.

Chronic Exposure: No known issues.

SECTION 3: Composition/Information on Ingredients

Chemical Name	CAS Number	Weight %
Polyurethane	9010-54-5	10-30%
Carbon Black	1333-86-4	50-70%
Styrene Acrylate Copolymer	57516-68-4	10-15%

This article is cured solid and does not pose hazards under normal use

SECTION 4: First-aid Measures

- General First Aid:** Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- Eye Contact:** Immediately flush eyes with plenty of water. Remove contact lenses. Flush with water for at least 15 minutes while occasionally lifting lower and upper eyelids. If irritation persists seek medical attention.
- Skin Contact:** Wash material from the skin thoroughly with soap and water. If irritation persists seek medical attention.
- Inhalation:** Remove to fresh air and rest in half-upright position. If breathing is difficult administer oxygen. Never give anything by mouth to an unconscious person. Get medical attention if symptoms develop.
- Ingestion:** If conscious, immediately rinse mouth and give large amounts of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
- Physician Notes:** High heat processing of this product may liberate thermal decomposition gases, which when inhaled can result in polymer fume fever. This condition is characterized by influenza-type symptoms (fever, cough, and malaise), which usually occurs within a few hours and resolves within 48 hours. Following severe exposure the patient should be kept under medical surveillance for at least 48 hours since delayed pulmonary edema may develop.
- Chronic Exposure:** Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 3 of 8

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media:** Use CO₂, dry chemical, alcohol-resistant foam, or broad water spray.
- Unsuitable Extinguishing Media:** Direct water stream.
- Specific Fire Hazards:** Burning of polyurethane foams may result in the generation of combustion products including, CO, CO₂, and hydrogen cyanide. Inhalation of these and other chemicals may result in severe irritation, difficulty breathing, asphyxiation and unconsciousness.
- Special Protective Equipment:** Use self-contained breathing apparatus with full face piece operated in pressure mode and protection for skin. Keep containers cool with water spray, if possible. Personnel and bystanders should be kept upwind of fire.

SECTION 6: Accidental Release Measures

- Personal Precautions:** None required under normal conditions.
- Protective Equipment:** Protective clothing is not required under normal conditions of intended use; however, the use of gloves and safety glasses is consistent with good manufacturing and hygienic practice.
- Emergency Procedures:** Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosion proof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.
- Containment Techniques:** Solid material is generally not a spill concern; however, dust particles from this material may be applicable to spill containment. Restrict area where spill occurred. Tarp spilled material if outdoors to prevent wind dispersion of particles until clean-up can occur.
- Environmental Precautions:** Avoid discharge of particles into drains/surface waters/groundwater.
- Methods for Cleaning-up:** Refer to Section 8, below, for exposure controls. Restrict area and ensure adequate ventilation. Dampen and gently sweep spilled material. Mechanically pick up dampened material and dispose of. Mop or wipe residual from surface using water.

SECTION 7: Handling and Storage

- Safe Handling:** Avoid inhalation of thermal decomposition products. Avoid skin contact with hot material. For industrial or professional use only. Store work clothes separately from other clothing, food and tobacco products. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products.
- Storage Conditions:** Store in a cool, dry area away from heat, sparks, open flames, or other sources of ignition. Store away from oxidizing agents.

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 4 of 8

SECTION 8: Exposure Controls/Personal Protection

Control Parameters: Not defined.

Engineering Controls: For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Local exhaust required above 400 C.

Individual Protection Measures: Personal Protective Equipment (PPE), below:

Eyes and Face: Use tightly-fitting safety goggles when dust and thermal decomposition gases may be present.

Skin: If exposure to sanding dust is expected, use nitrile rubber gloves on hands and wear additional impervious clothing as appropriate to protect skin.

Respiratory: An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

During heating:

Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

Half facepiece or full facepiece air-purifying respirator suitable for particulates
For questions about suitability for a specific application, consult with your respirator manufacturer.

Thermal Hazards: Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and Chemical Properties

Appearance: Physical State: Solid, Color: Black

Odor: Characteristic Latex

Odor Threshold: Not determined

pH: Not determined

Melting Point: Not determined

Freezing Point: Not determined

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 5 of 8

Initial Boiling Point:	Not determined
Boiling Range:	Not determined
Flash Point:	Not determined
Evaporation Rate:	Not determined
Flammability:	Not determined
Upper Flammability Limit:	Not determined
Lower Flammability Limit:	Not determined
Vapor Pressure:	Not determined
Relative Density:	Not determined
Solubility:	Insoluble
Partition Coefficients:	Not determined
Auto-Ignition Temp.:	Not determined
Decomposition Temp.:	Not determined
Viscosity:	Not determined

SECTION 10: Stability and Reactivity

Reactivity: This product is not reactive under ordinary conditions of use and storage.

Chemical Stability: This product is stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under ordinary conditions of use and storage.

Conditions to Avoid: Avoid storage under heat and by flames, ignition sources and incompatibles. Avoid exposure to temperatures above 150°C.

Incompatible Materials: Avoid contact or contamination with strong oxidizers, strong bases, caustics, mineral acids, amines, and acid anhydrides.

Hazardous Decomposition Products: Burning can produce carbon monoxide, carbon dioxide, hydrogen fluoride, or carbonyl fluoride. Carbon monoxide is high toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 6 of 8

SECTION 11: Toxicological Information

Skin corrosion/irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
Specific target organ toxicity:	Not classified
Aspiration hazard:	Not classified
Inhalation effects:	EXPOSURE TO HIGH CONCENTRATIONS: Feeling of weakness. Irritation of the respiratory tract. Nausea. Vomiting. Headache. Central nervous system depression. Dizziness. Narcosis. Excited/restless. Drunkenness. Disturbed motor response. Respiratory difficulties. Disturbances of consciousness.
Skin contact effects:	Dry skin. Cracking of the skin.
Eye contact effects:	Irritation of the eye tissue.
Ingestion effects:	Dry/sore throat. Risk of aspiration pneumonia. Symptoms similar to those listed under inhalation. AFTER ABSORPTION OF HIGH QUANTITIES: Irritation of the gastric/intestinal mucosa. Change in the haemogramme/blood composition. Change in urine output. Affection of the renal tissue. Enlargement/affection of the liver.
Chronic symptoms:	Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.

SECTION 12: Ecological Information

Ecotoxicity:	Not determined
Persistence:	Not determined
Degradability:	Not determined
Bioaccumulative Potential:	Not determined
Soil Mobility:	Not determined
Other Adverse Effects:	Not determined

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 7 of 8

SECTION 13: Disposal Considerations

Waste Disposal: Dispose of absorbed material in accordance with all federal, state, and local regulations. Dispose of contaminated water in a contained waste treatment system.

SECTION 14: Transport Information

DOT Classification:	Not regulated
Air Transportation:	Not regulated
Environmental Hazard:	Not determined
Transport in Bulk:	Not regulated
Special Precautions:	None

SECTION 15: Regulatory Information

State and local definitions may vary. If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

State Reporting

CA Prop 65: This material is not known to contain a chemical substance known to the State of California to cause cancer, reproductive, or developmental toxicity under California Proposition 65. However, 3PB Solutions LLC has not tested for the presence of listed chemical substances.

California SCAQMN Rule 443.1 VOC's: No VOCs

FDA: Not listed

USDA: Not listed

EPA: Not listed

Status on Substance Lists: The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations.

C.H.I.P. Regulations: None

Inventory Status: The ingredients of this product are listed on, or are exempt from listing, on the TSCA inventory.

MA Right to Know: This product contains the following chemicals on the Massachusetts Right to Know Law: None.

Clean Air Act: Hazardous Air Pollutants (HAPs): None.

Other Regulatory Info: None

AF SERIES BROADBAND FOAM RF ABSORBERS

Safety Data Sheet | Page 8 of 8

SECTION 16: Other Information

Revision Information: New issue.

Disclaimer: 3PB Solutions LLC provides the information in this document in good faith and aims to ensure its accuracy; however, we make no guarantees regarding its completeness or correctness. This document is intended solely for the distribution of health, safety, and environmental data and should not be considered a specification sheet. Some information may be derived from sources other than direct test data on the product.

The buyer assumes all risks associated with the use, storage, and handling of the product in accordance with applicable federal, state, and local laws and regulations. 3PB Solutions LLC expressly disclaims any warranties, whether express or implied, regarding the accuracy or completeness of the information contained herein, including any implied warranties of merchantability or fitness for a particular purpose.

As such, 3PB Solutions LLC will not be liable for any damages arising from the use of or reliance on this information, regardless of claims of inaccuracies, incompleteness, or misleading content.