



Advanced Adhesive Technologies, Inc.

AAT-2020 Turf and Outdoor Carpet Adhesive

Specification Sheet

Description:

AAT-2020 is a one part, moisture cured polyurethane adhesive formulated for exterior installation of synthetic turfs and outdoor carpets. This adhesive provides a strong, permanent, and water-proof bond over wood, concrete, and asphalt substrates. Do not use over pressure-treated wood.

Uses:

AAT-2020 Turf and Outdoor Carpet Adhesive is recommended for the following:

- Carpets and turfs with marine back, waffle back, latex foam, urethane foam (Enhancer® I, II, and Plus), woven needle punch, woven polypropylene (i.e. ActionBac®), latex unitary, urethane unitary, and PVC.

Surface Preparation:

1. Ensure that substrates are level and structurally sound. Concrete slabs must be fully cured. Asphalt paving must be sufficiently pressure washed to remove surfactants and other bond inhibiting agents.
2. Repair substrate and install joint sealants and fillers as necessary. Use Portland cement patching materials as appropriate.
3. Remove curing and parting compounds, surface hardeners and floor coatings that may affect the bond of the adhesive.
4. Mechanical surface profiling is the preferred floor preparation method. Acid etching is not recommended. Mechanically profile the floor to medium sandpaper texture.
5. Clean substrate of paint, dust, oil, grease or any other material that may inhibit the bond.

Adhesive Application:

1. Flooring material and adhesive must be stored in a pre-heated building where room temperature should be no less than 65°F 24 hours prior to the installation. Use AAT-2020 only when the air temperature is from 60°F-90°F and the relative humidity (RH) is from 40%-70%. The sub-floor temperature should be at least 60°F.
2. Clean and prepare substrate properly before attempting to apply adhesive according to the requirements of ASTM F-710-08.
3. Spread AAT-2020 with the appropriate trowel. (See below) Allow the adhesive to tack for no more that 25 minutes. (Higher temperatures and Relative Humidity will shorten this time. Lower temperatures and lower RH will lengthen this time.) See Below
4. Lay carpet or turf into adhesive as to minimize bubbles and wrinkles.
5. Seal the seams of the carpet/turf with the appropriate seam sealer.
6. Roll carpet/turf with 50-75 lb. roller to ensure 100% adhesive transfer to the back of the flooring. Roll carpet/turf from center out toward edges.
7. For carpets/turfs with a curling characteristic, it may be necessary to weight the edges until the adhesive has cured. It may be necessary to re-roll some carpets/turfs 3-6 hours after the initial installation.
8. Curing rate dependent on temperature and humidity. Firm Set 4-6 hours, Light Foot Traffic 8-10 Hours, Normal Foot Traffic 24 hours these times are based on 75°F and 50% RH. Higher temperatures and humidity shorten the cure rate, while lower temperatures and humidity lengthen the time required before use.

Clean-Up:

Clean all tools and excess AAT-2020 immediately after with mineral spirits. Use proper precautions when handling solvents. Cured adhesive can be removed by cutting with a mechanical tool.

For Best Performance:

- Wear gloves during application: AAT-2020 is difficult to remove from skin and clothing; if adhesive gets on skin, immediately wipe off with a dry cloth.
- DO NOT apply on frozen surfaces or standing water.
- Avoid contact with water and alcohol before use and complete cure.
- DO NOT use in areas subject to hydrostatic head pressure.
- DO NOT use on wet, contaminated or friable substrates.
- The maximum acceptable floor variation is 1/8" in 10 feet.
- To re-seal opened containers cover pails with two layers of plastic. Secure lid tightly. Turn pail upside down.
- To re-open container turn pail right side up and remove the lid. Cut and discard cured adhesive and plastic cover from pails. The uncured adhesive may now be used.
- Shelf life is one year from the date of manufacture in an unopened container. Store in a clean, dry area between 60-80°F.

Trowel Recommendation and Approximate Coverage Rates:

Woven Polypropylene, Unitary Woven
1/8" x 1/8" x 1/8" U notch
90-100 sq. ft. /gal

Marine, Waffle, Foam, Needle-punch, PVC
3/32" x 3/32" x 3/32" V notch
110-120 sq. ft. /gal

****Note:** Notch dimensions are Width x Depth x Separation**

Contains isocyanates. Inhalation may be harmful. Prolonged or repeated skin exposure may cause skin irritation. Do not swallow and avoid eye contact. If AAT-2020 comes in contact with the skin, wash with soap and flowing water. Seek medical advice if irritation persists. If adhesive comes in contact with eyes, flush with water for 15 minutes and seek medical advice. If adverse respiratory effects occur, move to fresh air and seek medical advice. If swallowed, do not induce vomiting and seek medical advice. Additional information is available by referring to the Material Safety Data Sheet.

FOR PROFESSIONAL USE ONLY. KEEP OUT OF THE REACH OF CHILDREN.

MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS AND RELATED MATERIALS
(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP: June 18, 2008 (Replaces January 14, 2008)

Prepared By: Tim Brown

NPCA HMIS

H = 3

F = 0

PH = 1

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: Advanced Adhesive Technologies, Inc.

STREET ADDRESS: 419 S. Glenwood Ave **CITY, STATE, AND ZIP CODE:** Dalton, GA 30721

EMERGENCY TELEPHONE: Chemtrec (800)424-9300 24hrs.

GENERAL INFORMATION: (706)226-0610 (8a.m.-5p.m. ET)

PRODUCT CLASS: Aromatic Isocyanate Adhesive

TRADE NAME: Turf and Outdoor Carpet Adhesive

MANUFACTURER'S CODE IDENTIFICATION: AAT-2020

SECTION 2 - HAZARDOUS INGREDIENTS

INGREDIENT	% (W/W)	CAS NO.	
Di-ethylhexyl phthalate		N/A	117-81-7
Polymeric diphenylmethylene Diisocyanate		N/A	9016-87-9
C10-C13 Isoalkanes		N/A	68551-17-7

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: Light Brown, thick liquid. Sweet odor.
Toxic by inhalation
Harmful if swallowed
May cause eye, skin, and/or respiratory tract irritation

Potential Health Effect: Eyes - Irritant
Skin - Irritant. Sensitizer. Prolonged/repeated contact can cause severe irritation.
Inhalation - Irritant. Sensitizer. May cause nausea and/or headaches. Person with a history of respiratory problems should not be exposed to this product in a closed environment.
Ingestion - Will cause adverse health effects.
use lung irritation and allergic respiratory reaction. Effect s may be permanent.

SECTION 4 - FIRST -AID MEASURES

- Eyes:** Flush open eyes underwater for 15 minutes. Seek medical attention if irritation persists.
- Skin:** Remove affected clothing. Wash skin with soap and water immediately. Wash contaminated clothing before re-use. Seek medical attention if irritation persists.
- Inhalation:** Move to fresh air. Administer oxygen if necessary. Seek medical attention.
- Ingestion:** Seek medical attention immediately. Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

- Flammable Properties:** Isolate from heat and open flame. Closed container may pressurize and explode when exposed to extreme heat. Material releases CO² on contamination with moisture, and may pressurize and explode.
- Extinguishing Media:** CO², chemical foam, dry chemical
- Protection of firefighters:** Self contained breathing apparatus and full protective clothing should be worn by firefighters.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Use personal protective equipment as recommended in Section 8.
- Environmental Precautions:** Obey relevant federal, provincial and municipal laws.
- Methods for Containment:** Cover spill with absorbent material. Place in an open-top container and remove to a ventilated area. Allow to sit in an open container for 24 hours.
- Methods for Clean-Up:** Decontaminate absorbent and spill area with a solution of 8% ammonia, 2% detergent and 90% water.

SECTION 7 - HANDLING AND STORAGE

- General Warning to Prevent Exposure:** Do not breathe fumes or vapors. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.
- General Storage Information:** Store in tightly-sealed containers in a cool, dry area. Keep away from moisture. Do not open containers till ready to use. Inspect containers regularly to ensure that product is not building pressure. If containers show signs of pressurization, place a tarpaulin over the container and relieve the pressure by puncturing the lid with the long-handled spike. (Only those required for this operation should be in the area.)

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredient	Exposure Limit	Unit
Di-2-ethylhexyl phthalate	5 (TLV-TWA)	mg/m ³
Polymeric diphenylmethane diisocyanate	0.05 (ACGIH TLV)	mg/m ³

Engineering Controls: Outdoor application: None Required.
Indoor/enclosed areas: Use local exhaust ventilation to keep vapor concentrations below TLV.

Personal Protective Equipment: Eyes: Safety glasses with side shields or goggles.
Skin: Chemical resistant rubber or plastic.
Inhalation: NIOSH approved organic respirator if TLV is exceeded. (Respirator not required for outdoor applications).

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Thick, light brown colored liquid.
Odor:	Sweet
Melting Point:	N/E
Boiling Point:	N/E
Flash Point and Method:	>61°C
Evaporation Rate: (Butyl acetate =1)	N/E
Upper/Lower Flammable Limits:	N/E
Vapor Pressure @ 77°F:	N/E
Vapor Density:	N/E
Specific Gravity @ 77°F:	1.26

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	Moisture, excessive heat
Incompatible Materials:	Water, strong bases and alcohols
Hazardous Decomposition Products:	Carbon dioxide and carbon monoxide will form at temperatures exceeding 500°F.
Possibility of Hazardous Reactions:	Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Dose Toxicity:	Di-ethylhexyl phthalate	Oral, LD ₅₀ :	30000 mg/kg (rat)
		Dermal, LD ₅₀	25000 mg/kg (rabbit)
		Inhalation, LD ₅₀	N/E
	Polymeric Diphenylmethane Diisocyanate	Oral, LD ₅₀ :	>5000 mg/kg (rat)
		Dermal, LD ₅₀ :	>5000 mg/kg (rabbit)
		Inhalation, LD ₅₀ :	490 mg/kg/4 hrs (rat)
	C10-C13 Isoalkanes	Oral, LD ₅₀ :	34,600 mg/kg (rat)
		Dermal, LD ₅₀ :	15, 400 mg/kg (rabbit)
		Inhalation, LD ₅₀ :	>1277 ppm/6hr (rat)
Repeated Dose Toxicity:	N/E		
Sensitization:	May cause sensitization by skin contact or by inhalation. May be an irritant to eyes, skin and/or lungs.		
Carcinogenicity:	N/E		
Neurological Effects:	N/E		
Genetic Effects:	N/E		
Reproductive Effects:	N/E		
Developmental Effects:	N/E		
Target Organ Effects:	Lungs– chronic inhalation can cause respiratory distress and respiratory impairments.		

SECTION 12 - ECOLOGICAL INFORMATION

Biodegradability Not readily biodegradable.

SECTION 13 - DISPOSAL CONSIDERATIONS

Recover or recycle if possible.

Uncured product is hazardous waste. Incinerate in accordance with federal, state, and local environmental controls/regulations. Dispose of cured non-hazardous product in accordance with the same regulations.

All provided information only applies to the material as supplied to the user. The characteristics outlined may not apply if the material has been used or otherwise contaminated. It is the responsibility of the user to determine the proper waste identification and disposal methods in compliance with applicable regulations.

SECTION 14 - TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT