

AAT-320 Professional Pressure Sensitive Adhesive Specification Sheet

AAT's *Go2 Adhesive* formulas have been formulated to ensure superior adhesive performance under the very demanding conditions commonly found in today's fast paced construction. As a *Go2 Adhesive* AAT-320 raises the bar for the performance of pressure sensitive adhesives. The brand new formula means that contractors may install carpet tile and vinyl backed broadloom carpet over concrete subfloors with elevated moisture emissions or in situ relative humidity levels. AAT-320 may also be used to install vinyl tile (LVT) and approved carpet cushions in double-glue installations. The CRI Green-label Plus Adhesive Certification Program has certified AAT-320 as a "low VOC" adhesive.



AAT-320 is a fast drying, pressure sensitive adhesive specifically formulated for the installation of carpet tiles and double-glue padding over commonly encountered smooth, clean sub-floors. AAT-320 is non-flammable, water resistant and has excellent vinyl plasticizer migration resistance. Like all of our adhesives, this adhesive is protected by the CleanGuard® two-stage antimicrobial. CleanGuard is a specifically formulated broad-spectrum, anti-microbial agent that protects our adhesives and sealers from microorganisms, such as mold or mildew, in both the wet and dry state.

AAT-320 Professional Pressure Sensitive Adhesive is recommended for the following carpet tile backings and floor coverings:

- Modular carpet, carpet tile: PVC, ethylene vinyl acetate (EVA), polypropylene, polyurethane cushion, bitumen
- Vinyl tile (LVT)
- Approved carpet cushion

AAT-320 may contribute to the LEED certification of projects in the following categories:

- IEQ Credit 4.1—Low Emitting Materials – Adhesives & Sealants
- IEQ Credit 4.3—Low Emitting Materials – Flooring Systems
- IEQ Credit 5—Regional Materials

Sub-floor and Site Conditions:

Recommended Sub-floors ■ Concrete above, on or below grade ■ APA rated plywood underlayment ■ Properly prepared gypsum cement

Sub-floors on and below grade must be protected from ground moisture with a functioning and intact Class A vapor retarder that conforms to the requirements of the most current version of ASTM E-1745. This vapor retarder must be directly beneath, and in contact with, the slab. Concrete sub-floors must be properly prepared according to the practices detailed in the latest standard, ASTM F-710. Gypsum sub-floors must meet the requirements of the most current version of ASTM F-2419. All curing agents [topical and admix], adhesives, paints, varnishes, oils, waxes, dust, dirt and any other bond inhibiting substances must be removed. The removal of bond inhibiting substances must be by mechanical means: sanding, shot or bead blasting. AAT-320 cannot be used if adhesive removers, solvent or chemical cleaners have been used.

The maximum moisture emission rate of the sub-floor cannot exceed 8lbs/1000 sq.ft./24 hours [ASTM F-1869], with a pH of 7.0- 9.0 [ASTM F-710], and a maximum *in situ* RH of 90% [ASTM F-2170] for carpet tile. The maximum moisture emission rate of the sub-floor cannot exceed 6lbs/1000 sq.ft./24 hours, with a pH of 7.0-9.0, and a maximum *in situ* RH of 80% for vinyl tile and approved carpet cushion. Prior to the application of AAT-320, sub-floors must be tested in strict accordance to the most recent versions of ASTM F-1869 and F-2170. Both testing protocols must be performed in order to provide the most accurate view of the sub-floor's condition. Sub-floors of lightweight concrete must be tested in strict accordance to the most recent version of ASTM F-2170. The placement of calcium chloride kits and humidity probes must follow the ASTM standards for proper locations and the correct quantity of test sites. These and other tests may be performed by AAT in the event of a warranty claim.

All sub-floors must be flat and structurally sound. Smooth or glazed surfaces must be abraded. Repair all joints and cracks with latex-based portland cement underlayments. Never sand existing resilient flooring that could contain asbestos. Follow all Federal, State and Local regulations relating to the removal of in-place, asbestos containing material. Very porous sub-floors must be primed with AAT-570 Primer.

NOTE: Strip or plank wood flooring, particleboard and OSB sub-floors should be covered with an approved underlayment (minimum thickness of ¼"). AAT-320 cannot be used if adhesive removers, solvent or chemical cleaners have been used. Before beginning installations with backing systems or over sub-floors not listed contact AAT's Technical Services for recommendations. AAT Technical Services can be reached at 1(800)228-4583 or by email at techservice@aatglue.com . It is the sole responsibility of the applicator of this product to determine the suitability and compatibility of this product for their intended use. *If the provided preparation and application instructions are not followed, DO NOT USE AAT-320.*

Installation Recommendations:

Typical towels and approximate coverage: (depth x width x spacing)

Carpet tile: 1/32" x 1/16" x 1/32" U notch trowel – 180-250 sq. ft./gal.

Vinyl Tile: Porous sub-floors – 1/16" x 1/16" x 1/16" □ notch – 125-150 sq. ft./gal. and Non-porous sub-floors – 1/16" x 1/16" x 1/16" V notch – 180-200 sq. ft./gal.

The building should be completely enclosed. All outside doors and windows should be properly installed with latching mechanisms in place. Adequate ventilation should be available. The HVAC system for the building should be operational and provide a consistent temperature of 65-85°F (air and sub-floor) and humidity levels should be between 40-65% for a minimum of 72 hours prior to the installation. These conditions must be maintained to ensure the long term success and performance of the installation.

1. Flooring and adhesive should be acclimated to the job site conditions for a minimum of 24 hours prior to the installation.
2. Be familiar with the recommendations and any special instructions from the flooring manufacturer before beginning the installation. Follow the flooring manufacturer's specific recommendations regarding sub-floors.
3. Refer to the information above for specific information regarding sub-floor preparation and site conditions. Spread the adhesive with the appropriate trowel as defined above. Allow the appropriate dwell or open time.
4. When installing carpet tile and vinyl tile (LVT) spread the adhesive with the appropriate trowel and allow the adhesive to dry to a clear, tacky state. Place the carpet tile or LVT into the dry, pressure sensitive adhesive. When installing carpet tile AAT-320 has a working time of up to 24hours. For LVT installations only spread as much adhesive as can be covered with the flooring in under six hours.¹ When installing carpet tile AAT-320 can be applied with a roller, but caution must be exercised to maintain an adequate adhesive coverage. For most applications the spread rate should not exceed 350 sq. ft. /gal.
5. For use with carpet cushion, spread the adhesive with the appropriate trowel and allow it to develop tack. DO NOT allow the adhesive to "skin-over" or dry. Place the cushion into the "wet-tacky" adhesive while the adhesive is still wet enough to transfer to the back of the cushion.
6. Roll the installed flooring with the appropriate three-section roller. For carpet use a 50-75lb roller and for LVT use a 75-100lb roller. Rolling should take place immediately after the flooring is placed into the adhesive.
7. It is recommended to minimize traffic over the newly installed flooring for at least 24 hours after the installation has been completed. Do not wash or clean the floor for five days after completion of the installation. To replace furniture and appliances use plywood panels to protect the flooring.

Specific Technical Data:

- A. Base: Acrylic-Ester Emulsion
- B. Color: White
- C. Clean-up: Remove wet adhesive with water and mild soap solution. Use AAT-197 Adhesive Remover to remove dried adhesive. Dried adhesive may be more difficult to remove; therefore, take care to remove adhesive from the surface of the flooring before it dries. DO NOT apply the solvent directly to the flooring material.
- D. Packaging: 4 gallon pails and one gallon pails (4 per case)
- E. Shelf-Life: One year from date of manufacture in un-opened container when stored at 70°F.
- F. Freeze-Thaw Stable to 15°F. Stability and spread-ability can be affected if allowed to freeze. Frozen material should be allowed to thaw at room temperature. DO NOT agitate or stir while frozen.
- G. VOCs: 0 g/l (Calculated per Ca. Rule 1168); Solvent free
- H. Not recommended for exterior installations.

NOTE: We recommend installers follow the guidelines set forth in the latest version of the CRI's *Carpet Installation Standard - 104*. Before placing the carpet, the adhesive must be allowed an open or dwell time appropriate for the carpet backing, jobsite and sub-floor conditions. It is extremely important to maintain recommended notch depth, width and spacing. The proper notch depth is that which will produce adhesive ridges that affect a 100% transfer to both the substrate and the carpet backing to include the inner recesses of the texture of the back.

¹AAT-320 has an extended working time up to 24 hours after the initial drying for carpet tile and 6 hours for vinyl tile if the area is kept dust free.



Safety Data Sheet

acc. to OSHA HCS

Printing date 07/18/2018

Reviewed on 03/22/2018

1 Identification

- **Product identifier**
- **Trade name:** AAT-320
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Advanced Adhesive Technologies
424 South Spencer Street
Dalton, GA 30721
+1 (800) 228-4583
- **Emergency telephone number:**
CHEMTREC USA +1 (800) 424-9300 & INTERNATIONAL +1 (703) 527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**
ethyl acrylate
1,2-benzisothiazol-3(2H)-one
- **Hazard statements**
May cause an allergic skin reaction.
Suspected of causing cancer.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
If exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).

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If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

140-88-5	ethyl acrylate	1.69%
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4 First-aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

- **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

140-88-5	ethyl acrylate	8.3 ppm
1336-21-6	ammonia	61 ppm
57-13-6	urea	30 mg/m ³

- **PAC-2:**

140-88-5	ethyl acrylate	36 ppm
1336-21-6	ammonia	330 ppm
57-13-6	urea	280 mg/m ³

- **PAC-3:**

140-88-5	ethyl acrylate	240 ppm
1336-21-6	ammonia	2,300 ppm
57-13-6	urea	1,700 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

140-88-5 ethyl acrylate

PEL	Long-term value: 100 mg/m ³ , 25 ppm Skin
REL	See Pocket Guide App. A
TLV	Short-term value: 61 mg/m ³ , 15 ppm Long-term value: 20 mg/m ³ , 5 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.

- **Breathing equipment:** Not required.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Goggles recommended during refilling.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid
Color: According to product specification

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.

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Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	25.8 %
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gl
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	47,337 mg/kg (rat)
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Dermal	LD50	108,521 mg/kg (rabbit)
Inhalative	LC50/4 h	128,994 mg/l (rat)

140-88-5 ethyl acrylate

Oral	LD50	800 mg/kg (rat)
Dermal	LD50	1,834 mg/kg (rabbit)
Inhalative	LC50/4 h	2,180 mg/l (rat)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

140-88-5	ethyl acrylate	2B
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | not regulated |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **TSCA (Toxic Substances Control Act):**

9003-04-7	2-propenoic acid, homopolymer, sodium salt
140-88-5	ethyl acrylate
1336-21-6	ammonia
57-13-6	urea
2634-33-5	1,2-benzisothiazol-3(2H)-one
7732-18-5	water, distilled, conductivity or of similar purity

- **Proposition 65**

- **Chemicals known to cause cancer:**

140-88-5	ethyl acrylate
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- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

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- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

57-13-6	urea	II
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- **TLV (Threshold Limit Value established by ACGIH)**

140-88-5	ethyl acrylate	A4
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- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

140-88-5	ethyl acrylate
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- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Warning

- **Hazard-determining components of labeling:**

ethyl acrylate
1,2-benzisothiazol-3(2H)-one

- **Hazard statements**

May cause an allergic skin reaction.
Suspected of causing cancer.

- **Precautionary statements**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Technical Department

- **Contact:** Technical Director

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

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