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Product Description Sheet

AT-4020 Structural Acrylic Adhesive

Issued August 1, 2007

Description:

Weld Mount AT-4020 is a high performance two part methacrylate adhesive engineered to bond a wide range of plastics, metals and composite assemblies. It offers outstanding bond strength, is extremely durable, with excellent impact and weathering properties. It is a unique adhesive which has very high viscosity to hold Weld Mount parts in position without sagging and it's 12 minute fixture time makes it ideal for higher temperatures or more complex assemblies where AT-2010 set to quickly. 75% of the ultimate strength is achieved in 40 Minutes. Full strength is reached in 24 hours. AT-4020 greatly increases the reliability of finished assemblies with , it's ability to withstand extreme temperature fluctuation and thermal cycling, and resistance to a wide range of chemicals and environmental conditions

Physical Properties: (Uncured)

Viscosity @ 25° C (cps)	Mixed	750,000 cps
Color:		Bright White
Specific Gravity:		1.35
Shore Hardness (D)		60
Mixed Ratio:	Volume: 1 to 1	Weight: 1 to 1
THIX Index:	5 - 6	
Flash Point:	51° F (COC)	
Elongation:		60%

Physical Properties: (Cured)

Strength (PSI)	Shear	2,340—3,390
	Peel	20—25 psi on steel
	Impact	20 ft lbs/in ² on steel
Working Time	7 to 8 Minutes	
Handling Strength	40 Minutes For	75% Overall Strength
Gap Fill	0.250 Inches	
Temperature Range::	-65° F - 250° F	
Clean Up Solvents		MEK, Acetone

Packaging:

AT-4020 is conveniently packaged in 50 ML cartridges. Special packaging is available on request

Effects Of Temperature:

AT-4020 is best used at temperatures between 65° F and 80° F. Temperatures below 65° F will slow the cure speed of the material and the viscosities will be higher. Temperatures above 80° F will cause the material to cure faster and the viscosities will be lower. For consistent dispensing maintain temperature as listed above.

WHAT AT-4020 BONDS:

METALS:

- ALUMINUM
- STEEL
- STAINLESS STEEL
- COATED METALS

THERMO SETS:

- FIBERGLASS
- PHENOLICS
- GEL COATS
- EPOXY
- RIM URETHANE
- POLYURETHANE
- LIQUID MOLDING RESINS
- SMC

THERMO PLASTICS:

- ACRYLICS
- ABS
- POLYCARBONATES
- NYLONS
- PPO'S
- VINYL'S
- PVC'S
- STYRENE'S
- PEEK'S
- PBT BLENDS
- PET BLENDS

BENEFITS:

- ◆ LITTLE SURFACE PREP
- ◆ EXCELLENT STRENGTH
- ◆ IMPACT RESISTANT
- ◆ 100% REACTIVE
- ◆ ROOM TEMPERATURE CURE
- ◆ EASILY APPLIED

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Storage And Shelf Life:

The shelf life of AT-4020 is one year from the date of manufacture which is indicated on the cartridge. Shelf life is based on the product being stored properly at a temperature no greater than 72° F. Exposure to temperatures above 72 F will reduce the shelf life of the product. While refrigeration isn't necessary it will extend the shelf life of the product in hot climates. AT-2010 should never be frozen.

Precautions:

AT-4020 is flammable. Keep it away from heat, sparks and open flames.

Keep out of reach of children. This product is for industrial use only. Keep containers closed when not in use. Avoid contact with skin and eyes. Harmful if swallowed. Refer to Material Safety Data Sheet (MSDS) for more complete safety information.

Mixing:

Mixing: It is highly recommended that either meter mix equipment or cartridges with static mix nozzles be used to properly ratio and dispense the adhesive. For hand mixing, combine Part A and Part B in the correct ratio and mix thoroughly. Heat buildup during and after mixing is normal. To reduce the likelihood of exothermic reaction or excessive heat buildup, mix less than 100 grams at a time. Mixing smaller amounts will minimize heat buildup.

Bonding:

For optimum bond strength and to insure maximum performance in the finished assembly mate parts together within the specified working time of the adhesive (7 - 8 Minutes). Make sure the bond joint has uniform coverage and that a sufficient amount of adhesive is in the bond area. It is important to have the adhesive applied, parts aligned and positioned, within the established work time for the product. To ensure maximum performance in the finished assembly parts should remain undisturbed until the joint is sufficiently cured.

For the highest strength bonds surfaces should be clean, dry, and free of contamination. Extensive surface preparation is not required for AT-4020 and good bonds can be formed on most substrates after a solvent wipe. However we recommend that metal surfaces (particularly aluminum) be given a scotchbrite cleaning to remove surface oxidation to achieve the highest bond strengths.

Clean Up:

It is important to remove excess adhesive from the substrate before it is cured. Solvent cleaners such as alcohol or acetone yield good results. Once the adhesive has cured it will be very difficult to remove and may require as much as 350° F to soften to allow removal.

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Associated Technologies specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Associated Technologies products. Associated Technologies specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** . We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.