

ACA 30-101; 30-102; 30-103

Bonds Metal to Polar and Non-Polar Plastics

Adhesive

HEAT
ACTIVATED
ADHESIVE

PRODUCT DESCRIPTION—The ACA 30-101, ACA 30-102, and ACA 30-103 series are waterborne dispersions of heat activated adhesives formulated to be used with a variety of grades of TPO/TPE materials. ACA 30-101 is for the softer grades of TPO/TPE, and has the lowest melting point. ACA 30-102 is for the midrange materials, and ACA 30-103 is for the hardest TPO/TPE, and has the highest melting point.

TYPICAL USE— This series of adhesives is designed to bond non-polar and polar surfaces such as polypropylene to aluminum and other metals using injection or over-molding processes. They will also bond metals to a variety of plastics and TPE/TPO/TPV, including Santoprene™. Since there are so many choices of metals and plastics in this class, testing is necessary to establish that a good bond is provided with a given application.

COATING METHOD—An adhesive dry film thickness of 0.3-1.0 mils should be applied to the metal surface and then dried to evaporate the water. The adhesive may be applied to metal foil by gravure printing, nip-fed reverse roll or wire wound bar coating methods; however, care must be taken to prevent blocking as these adhesives may be slightly tacky. It may be necessary to interweave a release film or to run chill rolls on the oven output to avoid roll blocking. Brush, spray, or a paint roller may be used for unique shapes. Dry the adhesive in a forced air oven up to 300°F for a brief time to yield an adhesive dry thickness between 0.3 and 1.0 mils.

TEST SAMPLE PREPARATION—Adhesive activation was accomplished at 250°F, 40 PSI, for 10 seconds using a laboratory heat sealer. Your conditions may differ depending upon the heat sealer and specific adherents. These adhesives were also evaluated using a Boy 15S injection molder with molds set up to make 1"x5"x0.125" peel test samples. The back mold in which the metal was inserted was heated to 200°F and the front mold where the polymers were injected was chilled with constant loss cold tap water. Metal parts should be preheated prior to molding to 180-200°F. Dry adhesive properties and custom testing are available upon request.

CLEAN UP—Wash the equipment with water to remove the wet adhesive. Dry coating removal will require a toluene solvent wash for best results. Toluene is a flammable solvent and must be used according to OSHA safety standards.

WET ADHESIVE PROPERTIES

Test	Value	Test	Value
pH	8 - 9	Percent solids by weight	41-45
Viscosity (cps)	100-200	Density (lbs/gallon)	8.8-8.9
wt./gal. (lbs.)	8.8-8.9	Color	Milky White Liquid

NON-WARRANTY NOTICE—Our recommendations, if any, for use of this product are based on tests believed to be reliable. The greatest care is exercised in the selection of our materials and in our manufacturing operations. We make no recommendation to use this product in any manner which conflicts with existing laws and/or patents and WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, REGARDING THIS PRODUCT OR ITS USE, INCLUDING MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. THE MANUFACTURER IS NOT LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES OF ANY KIND.

