

Product Information Sheet

ARcare® A-5490 (Developmental)



ARcare® A-5490 is a UV curable liquid adhesive designed for rapid bonding of a wide variety of plastics as well as metal substrates.

PRODUCT APPLICATIONS

The typical use for this product is to bond multiple-substrate components in medical devices including PC, PVC, ABS, PU, PS, FR4, stainless steel, etc.

FEATURES AND BENEFITS

- Cures effectively under UV-LED and UV-A irradiation (UVA energy higher than 0.369 J/cm²)
- Fast curing
- Pseudoplastic rheology designed for fluid dispensing
- Adhesive fluoresces red under UV illumination to aid in visual inspection of the bond area
- Contain no nonreactive solvents and low outgassing when fully cured
- Stable bond strength to polycarbonate
- Rugged, flexible bond

Uncured Properties		
Attribute*	Typical Values*	Test Method*
Solvent	No Nonreactive Solvents	N/A
Appearance	Light Yellow Liquid-Gel	N/A
Density, g/ml	1.10	Pycnometer, Internal Method
Viscosity, cPs	5000-8000	ART 15215 (shear rate – 2.5 Hz)
Lap shear to polycarbonate, PSI	~ 2000 psi	ART 15216 (pull rate – 0.5 in/min)

Cured Properties		
Attribute*	Typical Values*	Test Method*
Durometer Hardness	D90	ASTM D2240
Tensile at Break, MPa	32.8	ASTM D882
Elongation at Break, %	8.2	ASTM D882
Modulus of Elasticity, MPa	1180	ASTM D882
Refractive Index	1.51	ART 15131

* All stated values are nominal and should only be used as a guide for selection. They are not specifications.

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SAFETY DATA

After UV curing, this product has passed ISO 10993-5 cytotoxicity testing conducted by and independent laboratory. Additional safety information is available upon request.

AVAILABLE PACKAGING

Available in 30 mL black syringes.

STORAGE AND SHELF LIFE

Store the material in a dark place when not in use. Do not expose to light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in use. This material has a six month shelf life from date of manufacture when stored between 2°C (36°F) and 28°C (82°F) in the original, unopened container.

Note: The information contained on this data sheet is based upon test results of limited quantities of this material and may be modified by Adhesives Research following additional production experience and evaluation. This data should not be used in preparing specifications. Products identified as developmental may be subject to modification by Adhesives Research, Inc.

APPLICATION AND STORAGE OF PRESSURE-SENSITIVE ADHESIVE TAPES

Pressure-sensitive adhesive tapes function as a mechanical product; however, the adhesive itself is a chemical composition that can be sensitive to environmental conditions. A purchaser of pressure-sensitive adhesive products should be aware of the shelf life of each product and not purchase more than it can use before the expiration date. Shipping and storage conditions affect shelf life. The optimum storage temperature is 70 °F (21 °C). Cool, dry storage is recommended.

For best results...

- 1) The surfaces you wish to bond should be clean and free of oil, moisture and dust. If the surface temperature is below 40°F, it may be difficult to achieve a proper bond.
- 2) Do not use a pressure-sensitive adhesive product where it will be exposed to temperatures lower or higher than those designated for each product. Heat can destroy the effectiveness of the bond and extreme cold can cause the adhesive to harden and not adhere properly.
- 3) When the tape is applied, use firm hand or lamination pressure to achieve contact between the adhesive and the surface to which it is applied. Hand rollers or nip rollers may be needed for certain products or applications.

Consult your AR sales representative if you need additional information.

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