AXIS 931

Technical Data Sheet

Axis 931 Medical Device Adhesive is designed for rapid bonding of plastics typically used in the manufacture of medical devices. Resin Designs medical device adhesives contain no nonreactive solvents and cure upon exposure to UV light. Their ability to cure in seconds enables faster processing, greater output, and lower processing costs. Axis 931 is designed for bonding rigid or flexible PVC to polycarbonate, while not inducing stress cracking under typical molded stress levels. It enables easy assembly of components with close fitting tolerances (i.e. joining polycarbonate to flexible PVC tubing) and is recommended for applications involving small gaps less than 0.25mm. It has also shown excellent adhesion to a wide variety of substrates including glass, many plastics, and most metals. Axis 931 has been qualified to the ISO 10993-5 Protocol to assist in the selection of products for use in the medical device industry. Axis 931 complies with the Limit of Volatile Organic Compounds content in adhesives (GB 33372-2020) National Standard of the People's Republic of China.

APPLICATIONS	FEATURES	SUBSTRATES
• Needle bonding	• UV/visible light cure	• Plastics
• Reservoirs	• Moisture resistant	• Metals
• Transducer assemblies	• ISO 10993-5	
• Medical potting		

Typical Properties of Uncured Material*

Chemical Class	Acrylated Urethane
Color	Clear
Viscosity @25°C, Spn3 @20RPM, cps	250 – 450
Specific Gravity	1.05
Cleanup Solvent	Isopropyl alcohol

UV Light Cure Guidelines*

Recommended wavelength, nm	320 – 415
Minimum dosage required, J/cm^2	3

Typical Properties of Cured Material*

Durometer, Shore D	70
Elongation, %	65
Tensile Strength, MPa, [psi]	11 [1600]
Compressive Modulus @ -60°C, MPa	694
Compressive Modulus @ 20°C, MPa	165
Compressive Modulus @ 180°C, MPa	2.2
Glass Transition Temperature (Tg), °C	48
Lap Shear Strength, PCB / PCB, psi	700
Refractive Index	1.5
Temperature at 1% wt. loss, °C	199
Temperature at 5% wt. loss, °C	308
Processing Temperature Range, °C	-60C to 180C

***All properties given are typical values and are not intended for use in preparing specifications.**

Heat is also an important component with UV cure, and different systems produce different heat outputs. Cure testing was done in an open system and results will vary with application. Consequently, Resin Designs recommends that curing is discussed with our Technical staff to ensure the exact customer process being used will meet the coating cure requirements.

AXIS 931 was designed to be cured using a microwave UV oven. Arc and LED systems may cure AXIS 931; however, care must be taken during the equipment selection process to ensure minimum dosage and irradiance values obtained will properly cure the coating. Because of the variations possible in curing equipment type and configuration, it is strongly recommended that you contact Resin Designs Technical Support to discuss your equipment and process in detail.

Storage

Keep stored between 8°C and 28°C in tightly closed, light-blocking containers away from direct sunlight. Keep from freezing. Please refer to product labeling for shelf-life information. Consult SDS for safe handling recommendations.

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