

# **Extreme 2020** Clear Crystal Bonder

## **Product Description**

Extreme 2020 is a medium viscosity, clear adhesive for glass, ceramics and combinations of metals and glass and many hard plastics and glass. Extreme 2020 cures rapidly, in 3-5 seconds or less, when exposed to visible light from sunlight or halogen lamps. Cured performance shows excellent adhesion to all types of glass and metal substrates with good temperature and solvent resistance, and toughness at all temperatures. It shows good adhesion to polycarbonate, ABS, PVC and other engineering plastics. Extreme 2020 is formulated to withstand discoloring, such as yellowing, and will remain clear between glass substrates when exposed to strong sunlight. Extreme 2020 is also formulated to be solvent resistant and dishwasher resistant and was formulated for crystal and formed glass to metal products used in dining. Adhesion promotion agents are contained within the product to provide long term durability in high humidity applications for both metal and glass surfaces. Product is super fast curing and can be used for optical applications, crystal, glass, transparent plastics such as polycarbonate, fiber optics, wiring tacking.

#### Why You Should Select This Adhesive

- Medium Viscosity for thin bondlines
- 100% Solids Formulation
- Cures In 3 Seconds with sunlight between glass surfaces
- Excellent Surface Adhesion To Glass And Metals
- Excellent Clarity and non yellowing
- Good Temperature and Solvent Resistance

Contact an **EXTREME ADHESIVES**<sup>®</sup> Adhesive Applications Specialist for further recommendations on adhesive selection.

# **Physical Properties**

## Typical Uncured Properties (LIQUID)

Viscosity	2500cps
Specific Gravity	1.05 (20/20 ℃)
Color	Clear / water white
Flashpoint	>200₽ (COC Method0
Toxicity	Low to Moderate, see MSDS
Solvents	None
Components	One
Fillers	None
Cleanup Solvents	IPA, MEK acetone

#### **Typical Cured Properties**

(SOLID) typical cured thickness of 0.010"

Shore D Hardness	60
Thermal Service Range	-40℉ to 350℉
Solvent Resistance	Good
Elongation	>100%
Adhesion to Glass	excellent
Linear Shrinkage	<3%

#### **Typical Process Methods**

Apply a bead, drop manually or with automatic applicator to bond area. Expose to visible light from sunlight or UV light as below.

#### Shelf Life

24 months at 75F when stored in sealed original opaque containers as directed by AAS. AAS must approve packaging for this shelf life. Do not freeze.

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#### **Ultraviolet Cure**

Shield sealant from UV light during application to prevent polymerization lines on the part prior to application. Expose parts to ultraviolet light intensity of minimum 150 mw/cm<sup>2</sup> as produced by a 200 watts per inch bulb power with a wave length of 240 to 400 nanometers for 1-3 seconds. Cure time depends on coating thickness, distance from the energy source and the lamp power. Wand lamps have higher intensities of up to 2000 mw/cm<sup>2</sup> and will cure the product in 1 second or less. For microwave lamps, the H bulb is recommended to produce fastest cures.

The coating will be cured immediately after light exposure and can be handled or packaged. Cure continues for several minutes during the cool-down period. Solvent, peel or temperature service testing should be done after 10 minutes when the sealant returns to room temperature.

#### Sunlight or Halogen light curing

Shield sealant from visible light during application to prevent polymerization prior to assembly. Expose parts to visible light intensity of minimum 100 mw/cm<sup>2</sup> as produced by a 150 watts halogen bulb with a wave length of over 400 nanometers for 1-5 seconds. Cure time depends on coating thickness, distance from the energy source and the lamp power. Sunlight as defined as full, bright sunlight will cure thin sections between glass slides in 2-5 seconds. Surface of fillets will remain wet due to anaerobic effect.

Application Note: Material is not sensitive to moisture or oxygen, but is sensitive to UV light and heat.