



His Glassworks, Inc.

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FLEX-TEC INSTRUCTIONS AND TECHNICAL DATA SHEET

FLEX-TEC is an optically clear, low viscosity, shatter resistant elastomeric polyurethane coating developed for coating glass components to prevent shattering. Recommended for sealing glass surfaces that may shatter upon damage and thereby maintaining the physical integrity of glass components should the glass itself break.

This two-part coating material is easily mixed and cured developing a strong, tough bond to glass and ceramics. FLEX-TEC also offers marginal resistance to impact as the coating forms a thin, yet flexible and resilient coating.

Before proceeding with FLEX-TEC usage, you should read and understand the following information to ensure the correct application of the material.

Preparation and mixture of FLEX-TEC:

Mixture: The correct mix ratio for FLEX-TEC is 13 parts of A to 20 parts of B by weight.

It is recommended to heat Part A and B to around 80 degrees F for 20-30 minutes before mixing.

Mix thoroughly.

FLEX-TEC is a 100% solid and cures by chemical reaction, not by air drying. Do not attempt to thin FLEX-TEC as this will cause adverse reactions to the surface.

Flex-Tec must be vacuum de-gassed if bubble free coatings are required.

Application of FLEX-TEC:

Glass substrate preparation: Clean the glass thoroughly with alcohol or whiting. Surfaces should be clean, dry and free of all oils, grease or any other physical contaminants. Contaminants on the glass will prevent proper adhesion. Do not use commercial glass cleaners as they often contain surfactants, which may interfere with adhesion.



FLEX-TEC UV STABILIZED ANTI-SHATTER

Flex-Tec is available in 1.5 pound, 3 pound and 12 pound kits. Coverage is roughly 15 square feet per pound with a single coat.



A-1100 AMINO SILANE

A-1100 is used as a glass adhesion promoter for Flex-Tec. After cleaning your glass thoroughly, the A-1100 mixture is applied and allowed to dry. It will help promote the bonding of the Flex-Tec to the silica in the glass. Available in 1/2 liter and 1 liter bottles. Pre-mixed.



DIGITAL SCALE

Flex-tec should be weighed out 2:3 in order to achieve an adequate coating for your glass. We have larger pound scales available that make this process very simple.

For best adhesion to exterior glass surfaces, we highly recommend applying A-1100 Amino Silane to the glass surface. Simply wipe the A-1100 onto the glass surface and allow it to dry. Once dry, allow the material to sit for 3–5 minutes. The glass surface can then be cleaned again with either Alcohol or Whiting. The A-1100 will permanently alter the chemical composition of the glass for better adhesion of the Flex-Tec material to the silica in the glass surface.

Application: FLEX-TEC may be applied to surfaces by pouring, brushing, rolling, or dipping. FLEX-TEC is best applied at room temperature (70–75 degrees F, 21–24°C), and 50% or lower humidity. Do not attempt application beyond the FLEX-TEC pot life time (see below).

Curing: After final application the FLEX-TEC should remain undisturbed for 6 to 8 hours. You should apply heat lamps to the surface at around 120 degrees F for 4 to 6 hours for the most reliable cure. This will also prevent any unwanted moisture absorption and bubbles in the resulting cure material.

Safety Requirements:

Ventilation: Provide general or local exhaust. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Protective Clothing/Equipment: Wear chemically protective gloves, boots and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses, chemical safety goggles or face protection. Contact lenses are not protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Handling Precautions: Minimize breathing of vapors and avoid prolonged or repeated contact with skin. Wear proper protective equipment. If ventilation is not sufficient, wear proper respiratory equipment. Avoid moisture contamination. Be sure that partial containers are well sealed after use.

Clean up: All equipment should be cleaned IMMEDIATELY with acetone or alcohol. Clean up skin contact with soap and plenty of water. DO NOT clean your hands with acetone.

Storage Requirements: Store in a cool, dry, well ventilated area. Warm both parts prior to use to insure clarity of Part B.

Comments: Never eat, drink or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

Safety Data Sheet: SDS is available online at <http://www.hisglassworks.com/sds-sheets/flex-tec-part-a-sds.pdf>
<https://www.hisglasswork.com/sds-sheets/flex-tec-part-b-sds.pdf>

Packaging: Available in 1.5 pound, 3 pound and 12 pound kits.

WORKING PROPERTIES

POT LIFE (WORK TIME)	12-14 MINUTES FROM MIXTURE
GEL TIME BEGINS (VARIES WITH APPLICATION TEMPERATURE)	14-16 MINUTES
FULL CURE AT ROOM TEMPERATURE	6-8 HOURS AT 77°F (25°C)

PHYSICAL PROPERTIES

TYPICAL UNCURED PROPERTIES (LIQUID)

COLOR	CLEAR/COLORLESS
VISCOSITY, CPS MIXED (AFTER MIXING@75°F [25°C])	300
CLEAN UP SOLVENTS	ACETONE/ALCOHOL
MIX RATIO (PARTS BY WEIGHT) RESIN (A)/ HARDENER (B)	2:3

TYPICAL CURED PROPERTIES (SOLID)

OPERATING TEMPERATURE RANGE	-60° TO 150°F (-51° TO 66°C)
TENSILE STRENGTH	1,500 PSI
ELONGATION AT BREAK	110%
TEAR STRENGTH	140 PSI
SHRINKAGE	0.006

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The information contained herein are typical values as supplied by the manufacturers and/or vendors of the components listed and is believed to be reliable, however no guarantee or warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. All recommendations or suggestions for use are made without guarantee inasmuch as conditions of use are beyond our control. Determination of product suitability is the sole responsibility of the user.

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