

GSP 4625

G SX 4625TX (Thixo), G SX 4625-2 (FDA)

EPOXY ADHESIVE

Toughened, Strong Shear and Peel, Room-Temperature Cure

GENERAL DESCRIPTION

GSP 4625 is a tough, two-part, room temperature curing epoxy structural adhesive system with excellent shear and peel strengths. It has a 20-30 minute working time. It cures rapidly with mild heat (140-158°F / 60-70°C). When mixed, this adhesive is semi-flowable at RT. A tough adhesive, GSP 4625 has excellent adhesion to a variety of substrates: metal to metal, variety of plastics, FRP, composites, etc. GSP 4625 has a convenient 2:1 mix ratio and is available in side-by-side cartridges/tubes. A thixotropic (non-flowing) version is available as **G SX 4625TX**. For applications requiring FDA compliance, **G SX 4625-2** is available. *

* NOTE, for application requiring FDA, the final product using **G SX 4625-2** should be tested for FDA.

FEATURES

Convenient mix ratio (2:1 parts by volume)
Contains no solvents. Fast curing
Excellent adhesion to a variety of substrates
Very good thermal shock resistance
Tough and durable

APPLICATIONS

Panel & sub-assembly bonding
Golf clubs
FRP bonding
Metal to metal bonding
Plastic bonding & Composite bonding

COMPONENT PROPERTIES, TYPICAL @ 25°C (77°F)

PROPERTY	GSP 4625 PART A	GSP 4625 PART B
Shelf Life	6 months	6 months
Density (lb/gal)	9.5	8.9
Viscosity (cps)	30,000-90,000	7000 – 20,000
Color	Off-White	Opaque Light-Yellow

HANDLING PROPERTIES

PROPERTY	GSP 4625
Mix Ratio by Weight	100 A : 47 B
Mix Ratio by Volume	2 A: 1 B
Viscosity, mixed	Semi Thixotropic - Flowable
Pot Life, minutes	25 – 40 (thin bead)
Gel Time, minutes	20-40
Green Strength (R.T), hours	6 – 10
Full Cure (R.T), days	3 – 5
Oven Cure *	1-3 hrs @ 66°C/150°F – 82°C/180°F
Operating Temperature, °C / °F	-40°C/°F – 121°C/250°F

- *Heat cures tend to give slightly higher adhesive strengths. Adhesive can be gelled at RT prior to heat curing.*

PHYSICAL PROPERTIES, TYPICAL @ 25°C (77°F)

PROPERTY	GSP 4625
Hardness, min	80 Shore D
Color	Off White
Lap Shear (shiny aluminum)	3000+ psi
Lap Shear (grit blasted aluminum)	4500+ psi (higher with heat cure)
Peel Strength (grit blasted aluminum)	30+ pli
Glass Transition (T _g), °C / °F	70 / 158

INSTRUCTIONS FOR USE

SIDE-BY-SIDE (SBS) CARTRIDGE

The recommended method to ensure an accurate mix ratio when dispensing material from a SBS tube through a static mixer nozzle is as follows:

1. Remove the nozzle tip-cap by twisting and pulling it off. Do not discard tip cap unless all the material in SBS tube is used. Save for reattachment to seal remaining material in the SBS tube.
2. Extrude enough material until there is an even flow of material from both openings. Discard this material extruded from the SBS tube.
3. Attach the mix static nozzle by twisting it on the nozzle tip. Extrude material until ~2-3 cm (~1 inch) of material has extruded. Discard this material extruded from the mixer.
4. Material can now be applied directly to the bonding surface.
5. When application is complete and there is still material remaining in the SBS tube, remove and discard the static mix nozzle.
6. Clean the tip-cap thoroughly to prevent cross contamination of the tip openings.

7. Attach tip-cap back onto the SBS tube.

TO MIX BY HAND:

Mix Ratio by Volume: 2 parts by volume GSP 4625 Part A to 1 part by volume GSP 4625 Part B.

Mix Ratio by Weight: 100 parts by weight GSP 4625 Part A to 47 parts by weight GSP 4625 Part B.

Pot-Life: Do not mix more than can be applied in 15 minutes. Gel time is about 30 minutes but will vary depending on the mass mixed and the ambient temperature.

Proportion out components according to parts by weight or volume ratio into a non-reactive container (polyethylene, polypropylene, or metal de-rimmed can). Container should be about five times larger than the volume of the mixed material. Mix components very thoroughly, preferably with a metal spatula, scraping the sides and bottom of container to incorporate all material.

If working time allows, transfer material to a clean container without scraping sides or bottom before applying. Material should be used immediately.

Note: During application, do not scrape sides or bottom of the container used for mixing. Residual amounts of poorly mixed material may be incorporated. Such material may fail to cure completely, and may not achieve full physical properties.

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET (MSDS) PRIOR TO USING THIS PRODUCT

NOTICE TO USER:

The following is made in lieu of all warranties, expressed or implied. It is the customer's responsibility to determine fitness of use for all GSP products by directly testing the materials first-hand for each application. Please fully evaluate the materials so as to convince yourself of appropriate and adequate performance. Before using, customer shall determine the suitability of the product for the intended use, and customer assumes all risks and liability whatsoever in connection therewith.

The only obligation of the seller or manufacturer shall be to replace such quantity of product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. The foregoing may not be altered except by an agreement signed by officers/owners of G.S. Polymers, Inc.

Original: 02/28/2011KZ, Revised: 08/05/2021kz replacing 03/20/2021kz