

POLY-BOND® B39

Polyester-Based Pumpable General Purpose Adhesive

Introduction

Poly-Bond B39 is a high strength pumpable polyester adhesive formulated for production environment in boatbuilding and general fiberglass fabrication.

Main Features

- High-strength adhesive for poly/vinylester laminates
- Reliable strength in thin and thick bondlines
- Excellent “wet-out” of surface - strong bonds to poly/vinylester laminates
- No volume loss during pumping
- Hangs well on vertical and inverted surfaces
- Stacks well on top of stringers
- Long geltime and fast cure for quick demolding
- Fast pumping speed with low pumping pressures

B39 was formulated to provide reliable structural bonds in both thin and thick bondlines (1/8” to 1”, 3 – 25mm). B39 has low shrinkage, low exotherm and no volume loss during pumping. The long geltime and fast cure make it ideal for the bonding and quick demolding of large parts such as fiberglass overhead and interior liners and molded structural grids. B39 “hangs well” on vertical and inverted surfaces, and “stacks” well on top of stringers. For bondline thickness of 1” (25 mm) and less, the exotherm is low, reducing the chance of print-through in thin laminates. B39 can also be used for hull-to-deck joints and strake filling. B39 uses MEKP catalysts, and is available in “S” (Summer) and “W” (Winter) grades.

General Properties

Color	Light Grey
Density	1-1.1 g/cc; 8.3 – 9.2 lbs. gallon
Shrinkage	Less than 1%
Thixotropy	Non-sagging
Capillary Absorption	None, non-porous surface
Viscosity	280,000 – 320,000 cps
Exotherm, 100 gram mass	210 – 270°F (100 – 135°C)
Exotherm, 1” (25.4mm) Bondline	150 – 170°F (66 – 77°C)
Recommended Bondline Thickness	1/8” – 1” (3 – 25mm)
Hardness after 24 Hours	Shore D 70 min. value

Catalyzation

5 Gallon Pails: Mix contents before catalyzation with a paddle type mixer. After catalyzation, mix again, with care to scrape edges and bottom of pail. If low temperature prevents a complete cure, increase shop temperatures, not the catalyst level. Assure that parts to be bonded have reached shop temperature. Drums: Poly-Bond B39, B39HP is dispersed from the drum by gun application, with internal mix catalyst systems. Dispension guns are supplied by: Magnum Venum Products, www.mvpind.com; GS Manufacturing, www.gsmfg.com; Glas-Craft, www.glascraft.com.

Surface Preparation

Surface to be bonded should be dry, clean and free of dust, oil or grease. Check resin system for secondary bonding time window to obtain a chemical bond. If surface is sanded, assure that no dust remains. Vacuum surface rather than using an airhose which only redistributes the dust. Avoid cleaning surface with solvents.

Catalyst Charts, Poly-Bond B39

Poly-Bond B39 "S" (Summer) Catalization Chart. 50 - 60 Minute Geltime

Crompton Hi-Point 90 (1.11 g/cc)				Norox MEKP-9/Norpol # 1 (1.11 -1.14 g/cc)				Arkema Luperox DDM-9 (1.004 g/cc)						
Temperature °F	°C	% of Catalyst (by Weight)	cc/Gallon (3.78 l)	Grams/Gallon (3.78 l)	Temperature °F	°C	% of Catalyst (by Weight)	cc/Gallon (3.78 l)	Grams/Gallon (3.78 l)	Temperature °F	°C	% of Catalyst (by Weight)	cc/Gallon (3.78 l)	Grams/Gallon (3.78 l)
75	24	3.5	125.1	138.9	75	24	3.00	108.2	119.1	75	24	2.4	94.9	95.3
80	27	2.7	96.5	107.7	80	27	2.35	84.8	93.3	80	27	1.9	75.1	75.4
85	29	2.2	78.7	87.3	85	29	1.8	69.4	71.4	85	29	1.5	59.3	59.5
90	32	1.75	62.6	69.5	90	32	1.45	52.3	57.6	90	32	1.2	47.4	47.6
95	35	1.4	51.8	57.6	95	35	1.25	45.1	49.6	95	35	1.00	39.5	39.7

Poly-Bond B39 "W" (Winter) Catalization Chart. 50 - 60 Minute Geltime

Crompton Hi-Point 90 (1.11 g/cc)				Norox MEKP-9/Norpol # 1 (1.11 -1.14 g/cc)				Arkema Luperox DDM-9 (1.004 g/cc)						
Temperature °F	°C	% of Catalyst (by Weight)	cc/Gallon (3.78 l)	Grams/Gallon (3.78 l)	Temperature °F	°C	% of Catalyst (by Weight)	cc/Gallon (3.78 l)	Grams/Gallon (3.78 l)	Temperature °F	°C	% of Catalyst (by Weight)	cc/Gallon (3.78 l)	Grams/Gallon (3.78 l)
60	16	3.4	121.6	134.9	60	16	2.7	97.4	107.2	60	16	2.5	98.8	99.2
65	18	2.5	89.4	99.2	65	18	2.2	79.4	87.3	65	18	1.8	71.2	71.4
70	21	2.1	75.1	83.3	70	21	1.8	64.9	71.4	70	21	1.45	57.3	57.6
75	24	1.8	64.4	71.4	75	24	1.4	50.5	55.6	75	24	1.2	47.7	47.6
80	27	1.4	50.1	55.6	80	27	1.15	41.4	45.6	80	27	1.00	39.5	39.7

These catalization charts have been generated from laboratory conditions and a constant controlled setting. Specific Gravity of the Poly-Bond B39 is 1.05 g/cc. The laboratory moisture level is less than 20% during these tests. Humidity will affect the results shown above. The information contained in this chart should be used as a base point. Geltimes must be confirmed at shop conditions for use in production environments.

Shelf Life

Poly-Bond B39 is a stable products, and adequate long-term storage conditions will result in a shelf-life of 12 months or more. After this time, the geltime may drift, and should be checked before use.

Storage

The product should be kept in securely enclosed containers. Storage should be in a dry place out of direct sunlight. The temperature should be between 65-77° F (18-25° C). Allow Poly-Bond to reach shop temperature before using. Keep containers closed to eliminate styrene evaporation, and to avoid change in properties of the material.

NOTICE: All precautionary labels and notices should be read and understood by all supervisory personnel and employees. Consult OSHA and government regulations for additional safety and health information. Purchaser is responsible for complying with all federal, state, or local laws and regulations covering the use of this product. The information contained herein is correct to the best of our knowledge. Please check our website for latest updates. The recommendations or suggestions contained in this bulletin are made without guarantee or representation as to results. We suggest that these recommendations and suggestions are evaluated by the purchaser's technical staff prior to use. Our responsibility for claims arising from breach of warranty, negligence, or otherwise is limited to the purchase price of the material. All values can be revised due to ongoing testing and are subject to change without notice.

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