

Chemlok® 305-1/310-B Black Epoxy Adhesive

Technical Data Sheet

Chemlok® 305-1/310-B Black adhesive is a general purpose, medium viscosity, two-component epoxy adhesive system used for bonding waterworks assemblies.

Features and Benefits:

NSF Approved – waterworks assemblies bonded with Chemlok 305-1/310-B Black adhesive have received NSF approval.

Environmentally Recommended – contains no solvent, nonflammable and virtually odorless.

Application:

Surface Preparation – Remove soil, grease, oil, fingerprints, dust, mold release agents, rust and other contaminants from the surfaces to be bonded by solvent degreasing or alkaline cleaning. Assemble as soon as possible.

Mixing – Mix Chemlok 305-1 resin with Chemlok 310-B Black hardener at a ratio of 1:1, by volume. Thoroughly mix the components until uniform in color and consistency. Be careful not to whip excessive air into the adhesive system. Handheld cartridges will automatically dispense the correct volumetric ratio of each component.

Applying – Apply the mixed adhesive in bead form. Use automatic meter/mix/dispense equipment for large applications. For small applications, use handheld cartridges to apply the adhesive in a continuous bead.

Join the parts in such a way as to avoid entrapped air. Apply only enough pressure to ensure good wetting of the adhesive on both surfaces. Squeezing a little adhesive out at the edges is usually a sign of proper assembly. It is not necessary to clamp the assembly unless movement during adhesive cure is likely.

Curing – Handling strength is achieved after curing for 8-16 hours at room temperature. Chemlok 305-1/310-B Black adhesive will cure to full strength in 24-48 hours at room temperature. Higher temperatures will provide faster cure times.

Once the adhesive has cured, it can be filed, sanded, machined or otherwise handled in the same way as a light metal. Paint, lacquers, enamels and other coatings can be applied to cured adhesive.

Cleanup – Clean excess adhesive on the bonded assembly, as well as the equipment, prior to the adhesive cure with hot water and detergent or an organic solvent such as ketones. Once adhesive is cured, heat the adhesive to 204°C (400°F) or above to soften the adhesive. This allows the parts to be separated and the adhesive to be more easily removed.

Typical Properties*

	305-1 Resin	310-B Black Hardener
Appearance	Clear Amber Liquid	Black Paste
Viscosity, cps @ 25°C (77°F) Brookfield HBF	10,000 - 18,000 Spindle 2, 10 rpm	200,000 - 700,000 Helipath, 5 rpm
Density kg/m ³ (lb/gal)	1126 - 1198 (9.4 - 10.0)	1234 - 1318 (10.3 - 11.0)
Solids Content by Weight, %	100	100
Flash Point, °C (°F) Closed Cup	≥93 (≥201)	≥93 (≥201)

*Data is typical and not to be used for specification purposes.



ENGINEERING YOUR SUCCESS.

Typical Cured Properties*

Elongation, % ASTM D882	2.228
Young's Modulus, psi (MPa) ASTM D882	405,000 (2792.4)
Glass Transition Temperature (T _g), °C (°F) by DMA	66 (151)

*Data is typical and not to be used for specification purposes.

Shelf Life/Storage:

Shelf life is two years from date of manufacture when stored by the recipient at 21-27°C (70-80°F) in original, unopened container.

Cautionary Information:

Before using this or any Parker LORD product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Values stated in this document represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

Information provided herein is based upon tests believed to be reliable. In as much as Parker LORD has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. In addition, Parker LORD does not guarantee the performance of the product or the results obtained from the use of the product or this information where the product has been repackaged by any third party, including but not limited to any product end-user. Nor does the company make any express or implied warranty of merchantability or fitness for a particular purpose concerning the effects or results of such use.

WARNING — USER RESPONSIBILITY. FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

©2022 Parker Hannifin - All Rights Reserved

Information and specifications subject to change without notice and without liability therefor. Trademarks used herein are the property of their respective owners.

OD DS3199 07/22 Rev.5



Parker LORD
Engineered Materials Group

111 LORD Drive
Cary, NC 27511-7923
USA

phone +1 877 ASK LORD (275 5673)

www.lord.com