

Chemlok® 6451 Adhesive

Technical Data Sheet

Chemlok® 6451 adhesive is a high-temperature adhesive used to bond NBR and HNBR compounds to metal. It can be applied as either a covercoat or one-coat adhesive.

When used as a two-coat system, bonds formed with Chemlok 6451 adhesive and Chemlok 207 primer are resistant to many adverse environmental conditions found in downhole applications, as well as display excellent tear strength.

Features and Benefits:

Versatile – bonds a variety of NBR and HNBR compounds to a variety of metal substrates when used in combination with Chemlok 207 primer; can be used as a one-coat adhesive.

Chemically Resistant – resists a variety of fluids, including oils and fuels, and various aqueous environments.

Environmentally Resistant – provides excellent resistance to water, humidity, salt spray and high temperatures.

Elastomers:

- Nitrile (NBR)
- Hydrogenated Nitrile (HNBR)

Application:

Surface Preparation – Thoroughly clean metal surfaces prior to application. Remove protective oils, cutting oils and greases by solvent degreasing or alkaline cleaning. Remove rust, scale or oxide coatings by suitable chemical or mechanical cleaning methods.

If applicable, allow primer to thoroughly dry before applying Chemlok 6451 adhesive.

For further detailed information on surface preparation of specific substrates, refer to Chemlok Adhesives application guide.

Mixing – Thoroughly stir adhesive before use and agitate sufficiently during use to keep dispersed solids uniformly suspended.

Dilution of the adhesive is not required, nor recommended; however, if deemed necessary, MEK or xylene can be used as a diluent but should not exceed 10% by volume. Slowly add diluent solvent to the container of adhesive while under agitation. Over dilution or rapid addition of diluent solvent can cause “shock” to occur. Solvent “shock” can result in gelling, particulate formation, or phase separation of the adhesive.

Applying – Apply adhesive by brush, spray, dip or flow methods.

Regardless of application method, the dry film thickness of Chemlok 6451 adhesive should be 15.2-20.3 micron (0.6-0.8 mil).

Typical Properties*

Appearance	Green-black Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 1, 60 rpm	0-100
Density kg/m ³ (lb/gal)	916.5-964.6 (7.65-8.05)
Solids Content by Weight, %	23-27
Flash Point (Seta), °C (°F)	0 (32)
Solvents	MEK, Xylene

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

Drying/Curing – Thoroughly dry coated parts prior to bonding assemblies. Chemlok 6451 adhesive cures during the rubber vulcanization process.

Cleanup – Use solvents such as xylene and MEK to remove adhesive before heat is applied. Once cured, removal by solvent is not possible.

Shelf Life/Storage:

Shelf life is six months from date of shipment 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.

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