

TECHNICAL BULLETIN

HERCU-LOK EPOXY THREAD LOCKING COMPOUND:

Hercu-Lok is a two-part epoxy-based adhesive specially designed for permanently locking metal threads used in Oilfield Downhole Drilling Tools. This product ensures that the connections it is being applied to does not back off during normal or harsh drilling conditions. Hercu-Lok is available in two-ounce kit sizes, all conveniently pre-measured in the exact mixing ratio for ease of use in the field or shop environments. Hercu-Lok contains some special additives to prevent galling of threads on both carbon and nonferrous steel. The mixed components are a soft gel, which prevents heavy applications from running and dripping after applying to connection(s).

PRODUCT CHARACTERISTICS (Cured Material):

Color	Emerald Green
Viscosity	Thixotropic gel, no sagging up to 30 mils thickness
Density	1.43 g / ml
Friction Factor	1.25 – 1.3
VOC	.Essentially none at normal ambient temperatures
Working Life	. Approximately 10 minutes at 77°F
Curing Schedule	. Initial set 30 min at 77°F
	Full cure 24 hours at 77°F
	Full cure 1 hour at 150°F
Specific Gravity	Base 1.44; Cure 1.41; Mixed compound 1.42 grams/cc

MAKE & BREAK TESTING:

The purpose of this test was to evaluate the make and break torque's, on both hot and cold connections 24 hours after Hercu-Lok was applied. The cold break test was on (2) 675" stub acme mud motor connections. The connections were assembled and torqued to 30,000-foot lbs. on a calibrated torque master. During the disassembly, the connections broke at 58,000-foot lbs. with a room temperature of 92 degrees F. The hot break test was on (2) 675" stub acme mud motor connections. The connections were assembled and torqued to 30,000-foot lbs. on a calibrated torque master. During the disassembly, the connections were assembled and torqued to 30,000-foot lbs. on a calibrated torque master. During the disassembly, the connections were heated with acetylene/oxygen and #12 rose bud torch to a temperature of 425 degrees F (Monitored with Tempilstik-425F/218C) and broke at 32,125-foot lbs. The connections were buffed and cleaned after testing. There were no signs of any thread damaged to either connections.



BENEFITS:

- Contains special additives that prevent galling of threads on both carbon and nonferrous steel.
- New generation soft gel, which prevents running or dripping after heavy application to connection(s).
- EZ handling burst bags with perforated quick tear end.
- Foil packaging, containing silica gel moisture absorber and nitrogen injection, which extends shelf life for up to 12 months.
- Unique emerald color, which provides NDT Inspectors better visual inspection, if missed during cleaning process.

*SDS and Technical Bulletin available on our web site @ www.topcatdistributors.com