

# Technical Data Sheet

## B2013 – EPOXY RESIN Revised

03.08.10



### B2013 – Epoxy Resin

#### PRODUCT DESCRIPTION

A steel-filled epoxy putty for general maintenance and repairs. For filling, rebuilding and bonding metal surfaces.

#### APPLICATIONS

- Repairs worn or fatigued metals
- Patch castings
- Making jigs and fixtures
- Rebuilds pump and valve bodies
- Restores bearing journals and races.

#### USEFUL HINTS/NOTES

- Applies easily, needs no special tools.
- Bonds most metals and concrete
- Machineable
- Resistant to most chemicals
- Qualified under Mil. Spec DOD-C-24176B

#### INSTRUCTIONS FOR USE

Proper surface preparation is essential to the success of any epoxy application. In all cases, the surface should be clean, dry free from oils and rough

1. Remove all oils, dirt and grease by means of a strong cleaner/degreaser
2. Roughen the surface by grit blasting (8-40mesh grit) or grinding. A3-5mil profile for most applications.
3. All abrasive preparation should be followed by another clean to remove any remnants from that process.
4. Ideal application temperature is 13°C - 32°C. Under cold conditions, heating the repair area to 38°C-43°C is recommended.
5. Mix equal quantities of the two parts and stir thoroughly until a uniformed colour is obtained. Where a static mixing nozzle is supplied the 2 parts will be mixed correctly upon dispensing.
6. Spread mixed material over the repair and work firmly into the substrate to ensure maximum surface contact. To bridge large gaps or holes, use fibreglass tape, expanded metal or mechanical fasteners.
7. Allow material to cure for at least 4 hours before machining. Lathe speed: 150ft/min. Cut: Dry Tools: Carbide Top Rake 6° (+/- 2°) – Side/Front 8° (+/-2°) Feed rate (rough): Travel speed 0.020 Rough cut 0.020-0.060 Feed Rate (finishing): Travel speed 0.010 Finish cut 0.010 Polishing: Use 400 to 650 emery paper wet. Material should polish to a 25-50 micron finish.

#### CURE

Working time is 45 minutes at 24°C functional (75%) cure is achieved in 16hours at 24°C. For maximum physical properties, heat cure for 4 hours at 34°C after curing at room temperature for 2.5 hours

#### TECHNICAL FEATURES

Colour	Grey when mixed
Mixed viscosity	Paste
% solids by volume	100
Cured density	2.33 gm/cc
Cure shrinkage ASTM D2566	0.0006 in/in
Specific volume	11.9 in/lb
Working Time	4-6 mins
Comprehensive strength ASTM D695	8,260 PSI
Adhesive tensile strength EASTMD1002	2,800 PSI
Cured hardness shore D ASTM 2240	78-80
Dielectric strength volts/mil ASTM D149	50-90
Coverage	48 sq.in/lb @ 1/4"
Temperature range	-40°C - 121°C

#### CHEMICAL RESISTANCE

Kerosene	Very good
Toluene	Fair
Ammonia	Very good
10 % sulphuric acid	Very good
10 % Hydrochloric acid	Very good
10 % Sodium hydroxide	Very good
Methanol	Unsatisfactory
Chlorinated solvent	Very good

#### STORAGE

Stored under dry conditions in closed containers between 5 and 25°C B2011 will have a shelf life of 12 months.

#### PRECAUTION

For complete safety and handling information, please refer to the appropriate Material Safety Data Sheet (MSDS) prior to using this product.

#### PRESENTATION

Cartridges.....28ml, 50ml  
Clam Packs.....28ml

PRECAUTIONS: This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the product. Warranty: All products purchased from or supplied by Bondloc are subject to terms and conditions set out in the contract. Bondloc warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Bondloc is considered accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Bondloc makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent.