



Technical Datasheet M455

Product Description

Bondchem M455 is produced in a two component transparent structural methacrylate adhesive, designed for the bonding of high strength plastic and composite applications. This grade is an advanced liquid composite, which combines shock resistance and toughness from a unique blend of hybrid rubbers, with a high tensile shear strength from an innovative liquid plastic resin. Due to demand we produce this system in both a medium viscosity and high viscosity non slump version. Once bonded this fusion of chemistries achieves an ultra high strength bond with excellent chemical and environmental resistance.

Typical Applications

Bondchem M455 is very versatile, and can bond a wide variety of substrates to plastic without the need for surface primers or conditioners. Typical examples shown below:

- Bonding polycarbonate letters in the sign industry.
- Bonding acrylic in POS manufacture.
- Repairing polycarbonate headlights.
- Bonding outdoor lighting lenses and fixtures.
- Assembling electric meter housings and covers.

Instructions For Use

1. Always consult MSDS before using M455 for the first time.
2. Carry out surface preparation where required. *
3. Remove cap, and attach mixer nozzle.
4. Dispense sufficient adhesive to ensure equal mix.
5. Apply adhesive to one surface and assemble components carefully, clamping if required.
6. It is always easier to remove any excess adhesive prior to cure using a suitable cleaner *
7. Allow the adhesive sufficient time to achieve handling strength before moving or unclamping components.

Properties of Uncured Material

Resin	Methacrylate Blend
Colour	Clear
Appearance	Transparent Liquid
Viscosity Spindle 6 @ 20rpm	10,000 cps
Cure System	Exothermic
Open Time	1-2 Minutes @20°C

Performance of Cured Material

ASTM D1002 Lapshear	Acrylic Plastic	8.2 Nmm2 **
ASTM D1002 Lapshear	Polycarbonate	12.5 Nmm2 **
Gap Fill	3mm	
Temperature Range	-55°C to 125°C	

*reduction in strength can occur above 150°C

Packaging

Bondchem M455 is available in 25ml, 50ml and 400ml Nylon cartridges for use with a dispensing gun.

Storage & Shelflife

Bondchem M455 should be stored unopened in a cool dry location, out of direct sunlight. Stored correctly, this grade can offer a 6 month shelf life from manufacture.

Health and Safety in Use

Bondchem M455 is a methacrylate and should not be used without consulting the MSDS, which contains full information regarding the use of this product, including Transport, Disposal, Toxicological, Exposure Controls, Accidental Release and First Aid measures essential to the safe use of this product.

The data, information and values contained in this Technical Data Sheet has been obtained by conducting various tests in a controlled laboratory environment, and should be used for guidance purposes only. Although we believe them to be reliable and accurate, users should always conduct their own tests in their specific working conditions to ensure that the product is suitable and effective for use. It is the users sole responsibility to determine the suitability of the product for the application. Bondchem Ltd cannot be held responsible for the results of procedures undertaken elsewhere, nor for the safeguarding of personnel or property, all of which is the duty of the user. Suitability of products or methods is discretionary. Therefore, warranties or implied usage obligations should not be attributed to, and are not the responsibility of, Bondchem Ltd. Bondchem Ltd are not liable for any financial loss or other damages incurred by the user as a result of the use of this product.

