

## Technical Datasheet M451

### Product Description

M451 is part of our latest range in the 400 series of hybrid engineering snf composite products representing our two-part structural adhesive technology. The M451 typically bonds low surface energy materials such as polypropylene (PP) polyethylene (PE).

### Typical Applications

**Bondchem M451** is very versatile, and can bond a wide variety of substrates without the need for surface primers or conditioners. Typical examples shown below:

- Lightweight automotive components.
- Polypropylene battery cases.
- Hand held electronic devices.
- Model Aircraft.
- Furniture Manufacturing.
- Underwater sensors.

### Instructions For Use

1. Always consult MSDS before using **M451** 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

*\*Contact your Bondchem representative for full information and usage instructions.*

### Properties of Uncured Material

Resin	Methyl Methacrylate
Colour	Cream/ Clear
Appearance	Thixotropic Gel
Viscosity Brookfield Sp6 @ 20 rpm	5,000-15,000 cps
Cure System	Exothermic. Peak at 25°C
Open Time	4-7 Min @ 20°C
Handling Strength	60 Min @ 20°C

### Performance of Cured Material

ASTM D1002 Lapshear	Up to 30 Nmm <sup>2</sup>
ASTM D638 Tensile Strength	Up to 30 Nmm <sup>2</sup>
Gap Fill	5mm
Temperature Range	-55°C to 120°C

### Packaging

**Bondchem M451** is available in 50ml and 400ml Nylon cartridges for use with a dispensing gun. **M451** is also available in 20 litre pails and 200 litre drums, for use with our **BC1 dispensing system**.

### Storage & Shelflife

**Bondchem M451** 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 M451 is a methyl 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.