

# TECHNICAL DATASHEET

## CML SM-15 Structural Adhesive

### Description:

CML SM-15 is a two component, 1:1 mix ratio toughened structural adhesive formulated for bonding thermoplastics, metals, ceramics, wood, concrete and standard thermoset plastics. Minimal surface preparation combined with rapid fixture time makes SM-15 ideal for a wide variety of assembly operations reducing production cycle times and costs. Excellent flexibility and toughness enables dissimilar substrates to be securely bonded. The final adhesive bond is designed to be load bearing and resistant to weather, humidity and a wide temperature variation.

Due to excellent chemical and weathering characteristics, CML SM-15 is recommended for outdoor weathering or solvent exposure, thermoformed plastic assemblies, PVC, Composites, Vinyls, ABS, Steel, Aluminium\*, Acrylics, Phenolic, Polycarbonate, Styrenics, Wood, Concrete and Ceramics.

\* Use of CML Metal Primer is recommended for durable adhesion to aluminium alloys and stainless steel where external exposure is likely.

### Benefits

- Convenient 1:1 mix ratio
- Room temperature curing
- Rapid fixture time
- Minimal surface preparation required
- High resistance to hydrocarbon based fuels (Petrol, jet fuel, Motor oil, and hydraulic fluid)
- Thixotropic/non-sagging
- Bonds dissimilar substrate combinations
- Gap fill up to 8mm

### Handling Properties:

|                            | Adhesive                       | Activator | Test Method |
|----------------------------|--------------------------------|-----------|-------------|
| Density, g/cm <sup>3</sup> | 0.98                           | 0.98      | ASTM E-201  |
| Viscosity @ 25°C, cPs      | 55,000                         | 50,000    | ASTM D-2393 |
| Colour                     | off-white                      | off-white | ASTM D-2393 |
| Mix Ratio by Volume        | 1                              | 1         | Calculated  |
| Working Time               | 6 minutes at 22°C              |           |             |
| Setting Time               | 15 minutes at 22°C             |           |             |
| Full Cure                  | 6 hours                        |           |             |
| Shelf Life                 | one year from date of shipment |           |             |

### Performance Characteristics:

| Bond strength tensile shear (ASTM D-1002)                  |       |
|--|-------|
| Polycarbonate alloy (MPa)                                  | 9.56  |
| ABS (MPa)  | 8.96  |
| Grit blasted steel (MPa)                                   | 20.7  |
| T-Peel strength (ASTM D1876 on 1.5mm 6061 Aluminium; kN/m) | 6-7   |
| Impact resistance (ASTM D950-61T grit-blasted steel; J/m)  | 1170  |
| Shore hardness (D)   | 78    |
| Gap filling (mm)   | 8     |
| Tensile elongation (%)                                     | 15-20 |

## Use:

For optimum performance, surfaces should be solvent wiped, free from heavy grease deposits, oil, dirt or other contaminants.

Apply the mixed adhesive directly to the surface and mate within six minutes to be assured of maximum bond strength. Allow application to set for 15 minutes before handling. Full cure will be achieved in six hours at 22°C. Working time and fixture time will change depending on ambient temperature.

## Storage & Shelf Life

Adhesive should be stored in a cool, dry place when not in use for extended periods. SM-15 has a shelf life of one year when stored at room temperature. Shelf life may be extended by refrigeration.

## Safety & Handling:

Consult Safety Data Sheet before use. Work in well ventilated areas using gloves, eye protection and clothing protection. Avoid contact to the skin and eyes. Avoid clothing contamination. Wash thoroughly after handling. These products may cause skin and respiratory allergic reactions. Consult Safety Data Sheet for complete precautions with this product.

**Important Notice:** The information and statements herein are believed to be reliable, but are not to be constructed as a warranty or representation for which we assume legal responsibility. User's should undertake sufficient verification and testing to determine the suitability for their own particular purposes of any information or products referred to herein. No warranty of fit for purpose is made. Nothing herein is to be taken as permission, inducement, or recommendation to practice and patented invention without licence.