

### PRODUCT DESCRIPTION

MXBON® 31332 is a light yellow to dark amber, opaque, thixotropic, modified acrylic structural adhesive liquid designed primarily for securing permanent magnets in motor magnet bonding applications. This product has demonstrated the ability to provide tough, durable bonds with outstanding impact and peel resistance.

|                      |                                    |
|----------------------|------------------------------------|
| Technology           | Acrylic                            |
| Chemical Type        | Modified acrylic                   |
| Appearance (uncured) | Opaque light yellow to dark amber  |
| Components           | One component – requires no mixing |
| Viscosity            | High                               |
| Cure                 | Activator                          |
| Secondary Cure       | Heat                               |
| Application          | Bonding                            |

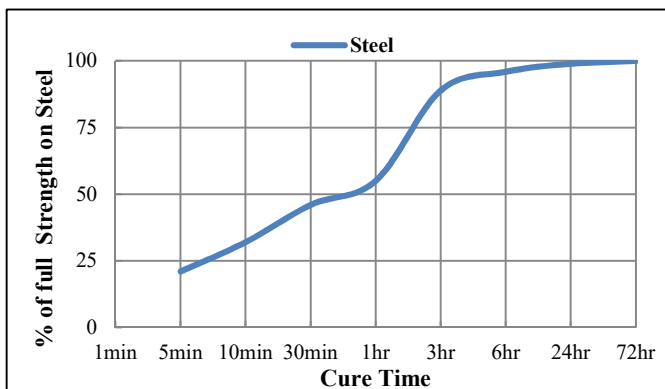
### TYPICAL PROPERTIES OF UNCURED MATERIAL

|  |   |
|--|---|
| Specific Gravity @ 25 °C                       | 0.89  |
| Flash Point -                                  | See SDS                                     |
| Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP) |   |
| Spindle 7, 20 rpm                              | 75000 to 130000                             |
| Shelf life                                     | 24 months unopened when stored at 8 to 12°C |

### TYPICAL CURING PERFORMANCE

#### Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time @ 23°C on grit blasted steel lap shears compared to different materials and tested according to ISO 4587. (Activator 037387 applied to one surface).



### Heat Cure

Heat can be used to effect or accelerate cure when surface priming operations are undesirable. Typical heat cure conditions consist of heating and maintaining bondline at a temperature given below for the corresponding time specified. Optimum conditions for heat cure should be determined on the actual assemblies.

- 130 °C for 20 minutes
- 140 °C for 15 minutes
- 150 °C for 10 minutes

### TYPICAL PERFORMANCE OF CURED MATERIAL

#### Physical Properties:

|  |      |
|--|------|
| Hardness, ISO 868, Shore D                               | 65   |
| Tensile Modulus, ISO 527-2, N/mm <sup>2</sup>            | 900  |
| Tensile Strength, at break, ISO 527-2, N/mm <sup>2</sup> | 17.0 |

#### Adhesive Properties

Cured for 24 hours @ 25 °C, Activator 037387 on 1 side  
Lap Shear Strength, ISO 4587/ASTM D1002/JIS K6850  
GBMS (Grit Blasted Mild Steel)

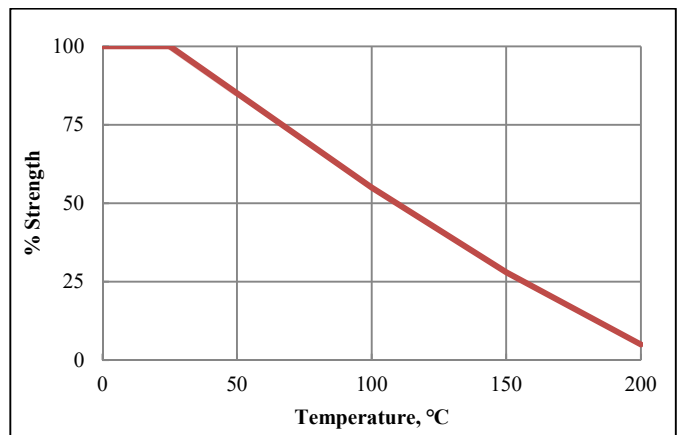
| Bond Gap   | N/mm <sup>2</sup> | psi     |
|------------|-------------------|---------|
| 0 mm gap   | >11.0             | >1595.4 |
| 0.5 mm gap | >3.4              | >493.1  |

### TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 48 hrs @ 25 °C, Activator 037387 on 1 side  
Lap Shear Strength, ISO 4587/ASTM D1002/JIS K6850  
GBMS (Grit Blasted Mild Steel)

### Heat Strength

Test at temperature



### Heat Aging

Aged at temperature indicated and tested @ 25 °C

|                  | % of initial strength |  |
|------------------|-----------------------|--|
| Temperature (°C) | 1000h                 |  |
| 90               | 110                   |  |
| 120              | 115                   |  |
| 150              | 130                   |  |
| 175              | 125                   |  |
| 200              | 85                    |  |

### Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 25 °C

|                             | % of initial strength |       |
|-----------------------------|-----------------------|-------|
| Environment                 | °C                    | 5000h |
| Fresh air                   | 87                    | 100   |
| Water/ethylene glycol 50/50 | 87                    | 110   |
| Unleaded Petrol             | 87                    | 20    |
| Motor oi                    | 87                    | 95    |

mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Cartell Chemical Co., Ltd's products. Cartell Chemical Co., Ltd specifically disclaims all warranties express or implied, including warranties of merchantability or suitability for a particular purpose arising from sale or use of Cartell Chemical Co., Ltd's products. Cartell Chemical Co., Ltd further disclaims any liability for consequential or incremental damages of any kind including lost profits.

### GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be use with chlorine or other strong oxidizing materials. Where washing systems are used to clean the surfaces before bonding, it is important to check the compatibility of the washing solution with the adhesive. In some cases, these solutions can affect the cure and performance of the adhesive. This product is not recommended for use on certain plastics. Users are recommended to confirm compatibility of the product with such substrates.

### Storage & Handling precaution

Keep adhesive in a cool and dry place. The storage temperature is recommended at 8 °C to 12 °C. For details, consult the Safety Data Sheet, (SDS). Shelf life is two years from the date of manufacture in the original container under the optimal conditions.

1. Avoid contact with skin and eyes.
2. If contact with skin, rinse with water.
3. If adhesive gets into eye, keep eye open and rinse with water thoroughly. Seek medical attention immediately.
4. Keep the material out of children's reach.

### Note

The data contained herein are furnished for informational purposes only and are believed to be reliable. However, Cartell Chemical Co., Ltd does not assume responsibility for any results obtained by persons over whose methods Cartell Chemical Co., Ltd has no control. It is the user's responsibility to determine the suitability of Cartell Chemical Co., Ltd's products or any production methods

