GERKO
PAINT RELATED PRODUCTS

# TDS
# TECHNICAL DATA SHEET

## MMA


### GENERAL

| CODE | DESCRIPTION |
|---|---|
| **MB50** | MMA 50ml |

### DESCRIPTION

MMA is a two-component room temperature curing structural acrylate adhesive designed for a durable bonding of composites, plastics and metals. This fast-curing methyl methacrylate finds its way into marine, wind turbine, transportation, infrastructure and other composite applications. Demonstrating excellent impact and peel and tear resistance.

### FEATURES

- Non-sagging thixotropic formulation ➔ Application on vertical surfaces
- Excellent UV-resistance and excellent ageing properties ➔ Designed for demanding environmental applications
- Rapid curing ➔ Speeds up process
- High strength, modulus and toughness ➔ Designed for demanding structural applications
- Does not attack surfaces ➔ Keeps surface intact
- Over paintable ➔ Blends in with surface color
- Gap filling up to 5 mm ➔ Excellent sag resistance

### TECHNICAL DATA

#### NOMINAL COMPONENTS PROPERTIES

| | MMA Adhesive | MMA Activator |
|---|---|---|
| Chemical base | Methyl methacrylate | Methyl methacrylate |
| Colour | Off white | Off white |
| Specific Gravity [g/cm$^3$] | 1,00 | 1,00 |
| Viscosity [mPas] | 60.000 | 40.000 |

#### TYPICAL CURE CHARACTERISTICS

| | | |
|---|---|---|
| Open time | @ 23° C [min] | 6 |
| Curing time 20 | @ 23° C [min] | 20 |
| Complete cure | @ 23° C [hours] | 24 |

Temperatures higher or lower than 23°C will have influence on the open time and curing time.

#### TYPICAL PROPERTIES OF CURED ADHESIVE

| | | |
|---|---|---|
| Shore D Hardness | EN ISO 868 | @ 23° C 73 |
| Tensile Strength | ASTM D638 | @ 23° C [MPa] 24 |
| Young's Modulus | ASTM D638 | @ 23° C [MPa] 1800 |
| Elongation at Break | ASTM D638 | @ 23° C [%] 33 |



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# MMA

## LAP SHEAR INFORMATION

| | Pre-treatment | | | | | |
|---|---|---|---|---|---|---|
| **Substrate** | **Cleaning** | **Sanding** | **Cleaning** | **Bondline thickness** | **Expected failure mode** | **Average strength** |
| CRS | Acetone | P80 | Acetone | 1 mm | Cohesive failure | 25,1 MPa |
| Aluminium | Acetone | P80 | Acetone | 1 mm | Cohesive failure | 22,3 MPa |
| Galvanized steel | Acetone | P80 | Acetone | 1 mm | Mixed failure | 19,5 MPa |
| Stainless steel | Acetone | P80 | Acetone | 1 mm | Cohesive failure | 20,4 MPa |
| SMC | IPA | - | - | 1 mm | Adhesive failure | 3,2 MPa |
| PP | IPA | P120 | Acetone | 1 mm | Adhesive failure | 2,4 MPa |
| PMMA | IPA | P120 | Acetone | 1 mm | Substrate failure | 5,3 MPa |
| Carbon | IPA | P120 | Acetone | 1 mm | Substrate failure | 14,9 MPa |
| PP/EPDM | IPA | P120 | Acetone | 1 mm | Adhesive failure | 2,1 MPa |
| PVC | IPA | - | - | 1 mm | Substrate failure | 11,2 MPa |

## ADHESION

MMA has excellent primer-less adhesion properties to metals, painted surfaces, aluminium PVC, glass fibre reinforced plastic, ABS, polycarbonate and plastic materials. MMA can be over-painted with most types of lacquers.

**Note!** In case of doubt of the substrate that must be bonded, test the strength on a small sample of the substrate.

## APPLICATION CONDITIONS

| | |
|---|---|
| Application temperature | Between 15°C and 25°C |
| Substrate | The surfaces to be bonded should be clean, dry and free from dust and grease |
| Application method | Manual and pneumatic guns |
| Mixing ratio | 1:1 |
| Mixing | Connect the mixertip to the cartridge and press out 2 cm. (do not use) to be sure that you have a 100% mixture of the 2 components |
| Assembling | After applying the adhesive, assembly the parts (within open time) and immediately clamp or press |



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## SAFETY

Please observe the information provided with the Material Safety Data Sheet.

MSDSs are provided to you under GERKO's policy of communicating to our customer health, safety and environmental information for safe handling, use and disposal of our products. This information must be made available to health and safety personnel within your organization and to all employees who come in contact with these products.

## STORAGE

Unopened containers stored at a dry place indoors between 5°C and 20°C. Keep out of direct sunlight.

## SHELF LIFE

The shelf life of our MMA is 9 months. This is based on continuous storage in unopened containers between 5 °C and 21 °C. Exposure above 21 °C will reduce the shelf life of the adhesive. Ideally the MMA is stored in an continuous temperature of 5°C. We highly recommend that products should never be frozen.

## PACKAGING

MMA is packed in 50 ml.



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