

Technical information - A 4545

A 4545 is the second generation of the two components **ACRYLIC** construction adhesives designed to combine the **High Shear and Temperature resistance** of conventional acrylic with the qualities of a rubber toughened adhesive where high Peel and Impact Strength are a feature.

It bonds Metals, Glass, Epoxy, Unsaturated Polyesters , GRP, Bakelite, Plastics, Ceramics and the combinations of these.

Bond strenght up to 350 kg(cm³) and temperature resistance up to 200°C (for a short time- intermittent)

Handling strenght is achieved in 5 minutes, 50% strenght in 1 hour and full cure time after 6 hours.

The bonded joints have excellent strenght, impact strenght, the bonded parts cannot be teared off easily, the adhesive elasticity is good even on slightly oily surfaces.

The application is easy using the various types of application guns or mixing nozzles. These can be used for most applications.

The normal operating temperature is from - 50 °C to +130°C.

Never mix big quantity of the parts A and B because the exothermic reaction produces big quantity of heat and vapours. The surface must be clean and dry (for degreasing use the product S 1950 or S 1960). A 4545 is tolerant to slightly oily surfaces.

To get efficient curing it is sufficient to apply par A to one side and part B to the other.

Application:

Although the product **A 4545** is efficient also on slightly oily surface it is recommended to use the cleaner S 1950 (S 1960) before the application and to grand off the surface with the sandpaper. **A 4545** is soluble in acetone.

A 4545 can be applied directly from the bottles in 1:1 ratio and the curing time can be adapted according to variation of mixing (3:2 maximum). The strenght is not affected after the full cure time (1 hour).

Chemical characteristics:

| | |
|----------------------------|----------------------------|
| Resin: | Methyl Methacrylate |
| Colour: | Geen and Pink |
| Colour when mixed: | Violet |
| Cure Speed 1:1 mix: | < 2 minutes |
| Cure Speed Ratios: | 2- 7 minutes |
| Viscosity: | 3500cps @ 20°C + - 500 cps |
| Gap Fill: | < 3 mm |
| Flash Point: | 12°C |
| Shelf Life: | 9 months @ 20°C |
| Specific Gravidity: | 1.02 |
| Operating Temperature: | - 40°C to + 180°C |
| Max.Operating Temperature: | + 200°C (Intermittent) |
| Normal Operating Limits: | + 130°C (Continuous) |
| Tensile Strenght: | 16 - 22 N/mm(2) |
| Solubility in water: | non soluble |
| Odour: | irritable |

Bond strength of A 4545: Substrates Kg/cm²

| | | | |
|---------------------------------|-----------|-----------------------|----------------------|
| Steel - steel | 276 - 342 | polyester - polyester | 31 |
| Aluminium-Aluminium | 224 | hard PVC - hard PVC | 35 damaged substrate |
| Copper-Copper | 244 | ABS - ABS | 47 |
| Stainless steel-Stainless steel | 204 | styrol-styrol | 24 |
| Brass-Brass | 228 | epoxy FRP-epoxyFRP | 84 damaged substrate |
| Chromium-Chromium | 162 | fenol FRP-fenol FRP | 65 damaged substrate |
| Nickel-Nickel | 193 | | |
| Zinc-Zinc | 214 | | |

Chemical stability: Steel-steel immersed for 7 days @20°C

| | kg/cm ² | Stability in % |
|------------------------|--------------------|----------------|
| Unimmersed part | 283 | 100 |
| Benzine | 246 | 87 |
| Water | 225 | 80 |
| Sodium hydroxide (10%) | 223 | 79 |
| Xylene | 195 | 69 |
| Etylacetát | 91 | 32 |

Curing and Strength:

| | |
|----------------------------|-------------------------|
| Curing time (50% strength) | 1 hour |
| Full Cure Time: | 6 hours |
| Strength Metal-Metal: | 20-35 N/mm ² |
| Strength Glass-Metal: | 16-22 N/mm ² |

Storage:

Store in a cool, dark area out of direct sunlight.

Shelf life: **6 months @ 20°C**

Packaging: 25 ml Syringe , set 100 g - A + B and 5 kg bulk

Warning:

Contains Methyl Methacrylate and Methacrylate Acid. Irritates eyes, skin and respiratory system. Store in cool, dark and well ventilated area out of direct sunlight. Prevent from ignition source, do not smoke during application.

Do not breathe in the vapours. In case of contact with the eyes bathe the eye with running water and consult a doctor. In case of contact with the skin wash immediately with plenty of soap and water. Follow safety measures not to rise static discharge.

The Specified values are average and do not represent specifications.

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