

IM3000

Changes are characterized by a marginal
vertical line

This sheet supersedes the one dated: April 26th 2011

Description: Cross linking mixture of mono- and polyfunctional methacrylic monomers

Physical data of liquid resin:

Appearance: Yellow to light yellow and clear, fluorescent on demand
Smell: Pleasant smell like ester
Flash point: 102 °C (DIN 51758)
Boiling point: 240°C at 1013 mbar
Surface tension: 29,8 mN/m
Viscosity at 20°C: 16 ±1 mPas
33 ±1s Zahn Cup N° 1
27 ±1s Frikmar Becher N° 3
Density at 20°C: 1,043 ±0,003g/ml
Vapour pressure at 20°C: 0,1 mbar
Washability: Excellent
Solubility in water: 107 g/l
Storage conditions: Non-catalyzed: 12 months at max. 35°C
Catalyzed: 12 months(*) at max. 25°C
Modifications through metals, alkalis, peroxides and direct sunlight.
(* in original packaging; do not keep under inert gas)
Gel time at 90°C: 3 - 7 minutes, recommended (catalyzed with 0,2 or 0,3%)

Physical data of hardened resin:

Appearance: Clear plastic with or without some cracks. Fluorescent execution to retrieve the plastic in the porosity of the castings using an UV-lamp.
Density: 1,2 g/ml
Hardness: 98 Shore A
Temperature range: -110°C to +200°C; Short time up to +250°C

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| Chemical resistance: | The resin sticks do not show any remarkable absorption of unpolar liquids such as fuel and oil. Chemical stability list available upon request. |
| Linear heat expansion coefficient: | 40 °C = $(120 \pm 5) 10^{-6} K^{-1}$ 60 °C = $(130 \pm 4) 10^{-6} K^{-1}$ 80 °C = $(152 \pm 2) 10^{-6} K^{-1}$ 100 °C = $(157 \pm 2) 10^{-6} K^{-1}$ |
| Pressure resistance: | According to ambient metal. |
| Heat conductivity: | 0,18°C W/m K (*) |
| Specific heat: | 1,47 KJ/kg K |
| Surface resistance: | $10^{15} \Omega$ DIN 53482 (*) |
| Specific volume resistance: | $> 10^{15} \Omega$ cm DIN 53482 (*) |
| Dielectric number | 3,5 ± 0,4 at 50 Hz (*) |
| DIN53483: | 2,7 ± 0,5 at 10^6 Hz (*) |
| Dielectrically breakdown voltage: | 450±50 kV DIN 53481 (*) |
| Dielectric loss factor | 0,05 ± 0,01 tan α at 50Hz (*) |
| DIN 53483: | 0,022 ± 0,018 tan α at 10^6 Hz (*) |

(*) No defined values but typical values for this type of resin.

Approvals of IM3000:

- KTW-Homologation: Hot water test (85°C)
(Hygiene-Institut Gelsenkirchen
2010) Cold water test (23°C)
Release for drinking water
- NSF International: Drinking water treatment chemicals
(2001, last update Mai 2011) and system components Health Effects
Certified to ANSI/NSF 61
- Chem. Laboratory Dr. Fülling: Cold water test
(1987)
- Gaswärme-Institut e. V. Essen: Resistance to gas; used for gas fittings
(1992)

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- Release acc. to QPL-17563, Class 1 and 3 acc. to MIL-I-17563-B (1992) and C (1995)
- Technologisches Gewerbemuseum: Biological degradation
Wien (1988)
- Lloyd's Register of Shipping: Statement of non-objection
(2009)
- TÜV certificate for production of impregnating resins according to DIN ISO 9001 / EN29001 since 1993; renewal in 2009 according to DIN EN ISO 9001:2008
- TÜV certificate for production of impregnating resins according to DIN EN ISO 14001 : 2009 (environmental management; since December 2011)
- Approval with all large car manufacturers
- Additional approvals upon request

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