

## IM3000

Changes are characterized by a marginal vertical line

This sheet supersedes the one dated: January 18<sup>th</sup> 2012

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

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

### Approvals of IM3000:

- KTW-Homologation: (Hygiene-Institut Gelsenkirchen 2010)  
Hot water test (85°C)  
Cold water test (23°C)  
Release for drinking water
- NSF International: (2001, last update Mai 2011)  
Certified to ANSI/NSF 61  
Drinking water treatment chemicals  
and system components Health Effects
- UL Underwriting Laboratories: (3<sup>rd</sup> April 2012)  
Certified to UL87; EQQY2  
UL 87, Power-Operated Dispensing Devices for Petroleum Products; IM3000 may be used when in contact with the following fluids: Fuel oil; Kerosene; Diesel; Gasoline; Gasoline/ethanol blends at levels designated as "gasohol" (E10 maximum); LP-Gas; Natural or manufactured gas.

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- Chem. Laboratory Dr. Füllung: Cold water test  
(1987)
- Gaswärme-Institut e. V. Essen: Resistance to gas; used for gas fittings  
(1992)
- 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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