

# Keratherm<sup>®</sup> - Softtherm<sup>®</sup> 86/500, 86/600

#### **Applications:**

- Heat pipe thermal solutions
- RD-RAM memory modules
- Automotive engine
- Control units
- Plasma supply console

## Optional available with adhesive coating!

This group of Softtherm® films has the best thermal behavior. The films are characterized by low thermal resistance and best heat dissipation, as well as good dielectric strength. Compressibility and low shore hardness ensure reliable and simple processability.

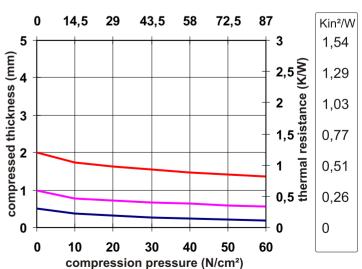
| Properties                              | Unit               | 86/500                 | 86/600                 |
|---|--------------------|------------------------|------------------------|
| Froperties                              | Ollic              | 80/300                 | 80/000                 |
| Colour                                  |                    | brown                  | grey                   |
| Thermal properties                      |                    |                        |                        |
| Thermal resistance R <sub>th</sub>      | KW                 | 0.25                   | 0.20                   |
| Thermal impedance R <sub>ti</sub>       | °Cmm²/W<br>Kin²/W  | 100<br>0.15            | 80<br>0.12             |
| Thermal conductivity λ                  | W/mK               | 5.0                    | 6.0                    |
| Electrical properties                   |                    |                        |                        |
| Breakdown voltage U <sub>d; ac</sub>    | kV                 | 1                      | 1.5                    |
| Dielectric breakdown E <sub>d; ac</sub> | kV/mm              | 2                      | 3                      |
| Volume resistivity                      | $\Omega$ m         | 1.0 x 10 <sup>11</sup> | 1.7 x 10 <sup>10</sup> |
| Dielectric loss factor $tan \delta$     | 1                  | 1.5 x 10 <sup>-3</sup> | 2.0 x 10 <sup>-3</sup> |
| Dielectric constant ε <sub>r</sub>      | 1                  | 3.9                    | 2.5                    |
| Mechanical properties                   |                    |                        |                        |
| Measured thickness (+/-10%)             | mm                 | 0.5                    | 0.5                    |
| Hardness                                | Shore 00           | 70 - 80                | 60 - 70                |
| Youngs modulus *                        | N/cm²              | 70                     | 77                     |
| Physical properties                     |                    |                        |                        |
| Density                                 | g/cm³              | 1.33                   | 1.28                   |
| Application temperature                 | °C                 | -60 to +200            | -60 to +180            |
| TML                                     | Ma. <del>-</del> % | < 0.24                 | < 0.40                 |
| Flame class                             | UL                 | -                      | -                      |
| Possible thickness**                    | mm                 | 0.5 – 2.0              | 0.5 – 1.5              |

<sup>\*</sup>Youngs modulus sample size 30mmx30mmx2.5mm; variable contact pressure; compression 50% of the measured thickness

#### Compressibilities of Softtherm® 86/500

#### 43,5 58 pressure (psi) 0 14,5 29 72,5 Kin<sup>2</sup>/W 5 2,22 1,33 compressed thickness (mm) 1,11 4 0,89 3 0,67 2 0,44 0,22 0,37 0 0 0 10 20 30 40 50 60 compression pressure (N/cm²)

### Compressibilities of Softtherm® 86/600



The data presented in this leaflet are in accordance with the present state of our knowledge. All statements, technical information and recommendations herein are based on tests we believe to be reliable. The customer is thereby not absolved from carefully checking all supplies immediately on receipt. The recommendations made in this catalogue should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. Before using, user shall deltermine the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection there with. We reserve the right to alter product constants within the scope of technical process or new developments. The recommendations do not absolve the customer from the obligation of investigating the possibility of infringement of third parties right and, if necessary, clarifying the position. Sellers' and manufacturer only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable either in tort or contract for any loss or damage, direct or incidental, or consequential, including loss of profits or revenue arising out of the use or the inability to use a product. No statement, purchase order or recommendations by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer, last updated:05/2010