

## SynTherm® HV-D

SynTherm® HV-D is tailored for high voltage and power electronics applications. Excellent hydrolysis resistance and best in class CTI values together with excellent electrical properties are key benefits when using SynTherm® HV-D.

The trend towards higher system voltages increases the risk of short circuits and leakage currents, challenging engineers to develop reliable and safe solutions. When creepage distance is a critical factor, SynTherm® HV-D is an ideal solution to provide the required electrical safety.

---

### Properties

- Good flammability properties
- Excellent tracking resistance (IEC 60112:2020)
- Superior chemical resistance and hydrolyses resistance
- Ideal to combine with thermal interface material to increase creeping distance
- Available with adhesives or corona treatment for coatings

---

### Application

- Battery Applications
  - E-mobility Applications
  - High-Voltage Inverter
  - Power Electronics
-

| Mechanical                                 | Unit  | Test Method     | SynTherm® HV-D | SynTherm® HV-D | SynTherm® HV-D | SynTherm® HV-D     |
|--------------------------------------------|-------|-----------------|----------------|----------------|----------------|--------------------|
| Thickness                                  | µm    | DIN EN ISO 527  | 50             | 100            | 150            | 250                |
| Tensile Strength MD                        | MPa   | DIN EN ISO 527  | 55             | 55             | 55             | 55                 |
| Tensile Strength CD                        | MPa   | DIN EN ISO 527  | 55             | 55             | 55             | 55                 |
| Elongation to Break MD                     | %     | DIN EN ISO 527  | 450            | 500            | 500            | 550                |
| Elongation to Break CD                     | %     | DIN EN ISO 527  | 500            | 500            | 500            | 550                |
| Electrical                                 |       |                 |                |                |                |                    |
| High Voltage Inclined Plane Tracking (IPT) |       | IEC 60587       | tbd            | tbd            | tbd            | Class 2A - 4,25 kV |
| Comparative Tracking Index (CTI)           | V     | IEC 60112:2 020 | >=600          | >=600          | >=600          | >=600              |
| Dielectric Breakdown Voltage               | kV    | IEC 60674 - 2   | tbd            | 17             | 21             | 29                 |
| Physical                                   |       |                 |                |                |                |                    |
| Flame Rating                               | -     | ANSI VTM        | tbd            | VTM-0          | VTM-0          | VTM-0              |
| Thermal conductivity                       | W/m K | C177            | 0,238          | 0,238          | 0,238          | 0,238              |
| Basis Weight                               | g/m²  | DIN EN ISO 536  | 87,5           | 175            | 262            | 437                |
| Operating Temperature                      | °C    | -               | -50/150        | -50/150        | -50/150        | -50/150            |
| Max. temperature                           | °C    | -               | 175 / <2h      | 175 / <2h      | 175 / <2h      | 175 / <2h          |

The information on this data sheet is based on the information provided by our supplier. It does not represent any specification or agreements regarding conditions or properties. The indicated values are standard values. Deviations from those values due to production and application cannot be excluded. The information on this data sheet is addressed to experts who use it at their own discretion and at their own risk. We do not guarantee results, or accept liability for the indicated specifications or for results obtained based on the specifications. Please contact us for more detailed information. Non-toxic and toxic substances are listed on the safety data sheet.  
Update 10/25

Dolphon®, SYNTHITE® are registered trademarks of John C. Dolph Company (Dolphins).

