

# Product Handling Information Sheet

Hm 2472 (UP GM 204)

## 1. Company

|              |                                                                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name/Address | <b>Liedtke Kunststofftechnik</b><br>Siemensstr. 32a, 42551 Velbert/Germany (DE) • Tel. +49 2051 605 105<br>info@liedtke-kunststofftechnik.de • www.liedtke-kunststofftechnik.de |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 2. Product Description

|                                |                                                                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Product                        | Technical semi-finished product (sheet / rod)                                                                                         |
| Standard designation           | Hm 2472 acc. DIN 7735 / UP GM 204 acc. EN 60893 (glass-mat hard laminate, polyester resin)                                            |
| Characterisation               | Thermoset laminate made of glass-fibre mats, impregnated with unsaturated polyester resin and pressed under heat/pressure             |
| Main components                | <ul style="list-style-type: none"> <li>• Unsaturated polyester resin (UP resin)</li> <li>• Glass-fibre mat (reinforcement)</li> </ul> |
| Components requiring labelling | none                                                                                                                                  |
| Classification under REACH     | Article                                                                                                                               |
| Notes                          | Not declared as a food contact material.                                                                                              |

## 3. Product Properties

|                                       |                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------|
| Form/State                            | <ul style="list-style-type: none"> <li>• solid (thermoset)</li> </ul>                          |
| Colour                                | white                                                                                          |
| Odour                                 | <ul style="list-style-type: none"> <li>• odourless to slightly characteristic</li> </ul>       |
| Density                               | 1.80 g/cm <sup>3</sup>                                                                         |
| Limiting temperature (continuous use) | 155 °C (thermal class F)                                                                       |
| Ignition temperature                  | approx. 400–450 °C (typical for UP resin laminates)                                            |
| Thermal decomposition                 | > approx. 300 °C                                                                               |
| Flammability                          | self-extinguishing (UL 94 V-0)                                                                 |
| Notes                                 | Absorbs only minor amounts of moisture; this may cause minor changes in electrical properties. |

## 4. Hazard Information

|                                                  |                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Particular hazards to humans and the environment | none (in the cured state)                                                                                                                                                                                                                                                                                                                                  |
| Notes                                            | Dust generated during machining (glass-fibre/resin dust) should not be inhaled – glass fibres may cause mechanical irritation. Overheating or burning can produce harmful decomposition products (including carbon monoxide, carbon dioxide, and possibly traces of styrene). No nitrogen in the base molecule, therefore no formation of nitrogen oxides. |

## 5. Handling and Storage

|                        |                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Handling               | <ul style="list-style-type: none"> <li>• The product can be machined with standard commercial machinery (sawing, milling, turning, drilling, punching).</li> <li>• Ensure dust extraction during machining (glass-fibre dust).</li> <li>• Use sharp, carbide-tipped tools; note increased tool wear due to the glass-fibre content.</li> <li>• As a thermoset, cannot be formed or welded.</li> </ul> |
| Storage recommendation | <ul style="list-style-type: none"> <li>• horizontal</li> <li>• dry</li> <li>• protected from direct UV/sunlight exposure</li> <li>• protected from contamination</li> </ul>                                                                                                                                                                                                                           |
| Protective measures    | In case of dust generation, use extraction / respiratory protection; skin contact with glass-fibre dust may cause mechanical irritation – protective gloves recommended.                                                                                                                                                                                                                              |
| Shelf life             | –                                                                                                                                                                                                                                                                                                                                                                                                     |
| Notes                  | –                                                                                                                                                                                                                                                                                                                                                                                                     |

## 6. Transport

|           |                                                                                                                       |
|-----------|-----------------------------------------------------------------------------------------------------------------------|
| Transport | <ul style="list-style-type: none"> <li>• Not a dangerous good within the meaning of transport regulations.</li> </ul> |
| Packaging | –                                                                                                                     |
| Notes     | –                                                                                                                     |

## 7. Firefighting Measures

|                               |                                                                                                                                                                                       |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media  | <ul style="list-style-type: none"><li>• Water</li><li>• Foam</li><li>• Dry extinguishing agent</li><li>• CO<sub>2</sub></li></ul>                                                     |
| Possible combustion products  | <ul style="list-style-type: none"><li>• Carbon monoxide</li><li>• Carbon dioxide</li><li>• Smoke</li><li>• Possibly traces of styrene</li></ul>                                       |
| Required protective equipment | <ul style="list-style-type: none"><li>• Firefighters and others exposed to combustion products should wear full protective clothing and self-contained breathing apparatus.</li></ul> |
| Notes                         | Collect fire residues and dispose of in accordance with local regulations.                                                                                                            |

## 8. Disposal Considerations

|                          |                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------|
| Recyclability            | Thermoset (glass-fibre reinforced); material recycling not possible, thermal recovery possible. |
| European Waste Catalogue | The product is not classified as hazardous under the European Waste Catalogue (EWC).            |
| Disposal                 | Dispose of in suitable incineration plants in accordance with local regulations.                |
| Waste code no.           | <ul style="list-style-type: none"><li>• 07 02 13 - plastic waste</li></ul>                      |
| Notes                    | –                                                                                               |

## 9. Labelling, Directives and Regulations

|                                |                                       |
|--------------------------------|---------------------------------------|
| Labelling under EEC directives | not subject to labelling requirements |
| Notes                          | –                                     |

## 10. REACH Information

|             |                                                                                                                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Information | Under EC Directive 1907/2006/EC (REACH), Article 3, No. 3, our products are articles that are not subject to registration. Our products are articles under REACH, therefore no SDS requirement applies. |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 11. Other Information

|                   |                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other information | The above information is based on our current state of knowledge and does not constitute a guarantee of properties. Existing laws and regulations must be observed by the recipient of our product on their own responsibility. |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|