# Zelfo HG

## Cellulose Acetate

### Zelfo Technology GmbH

#### Message:

Formed from cellulose (plant) fibres, Zelfo processed materials are self-binding and non toxic, with properties that are modifiable as required by the end user.

Bio-binder: Zelfo engineered fibre has multiple uses as a bio-binder in newly developed products as well as a replacement for many currently used synthetic binders.

Formable: 3D Housings/Cases 2D Sheets/Panels

Finish: Textured or smooth; unfinished, matte or gloss surface.

Colour: Untreated, surface-treated or pigmented throughout; both neutral and vibrant tones are possible.

Low/medium/high density

Water resistance

Fire resistance

The use of Zelfo-based materials provides the potential to up-cycle fibre based waste, which can then be recycled into new products which, in turn are recyclable and biodegradable. The patented Cellulose Optimization Resource Efficient (CORE) technology provides an extremely energy- and water-efficient processing method to transform fibre into a range of self-binding Zelfo materials. The Life Cycle Assessment (LCA) of these materials varies by application; however their source materials, production processes, composition and end-of-life disposal have a low carbon footprint and minimal environmental impact.

| General Information |  |              |  |  |
|---------------------|--|--------------|--|--|
| Recycled Content    | Yes  |              |  |  |
| Features            | Biodegradable  |              |  |  |
|                     | Good Strength  |              |  |  |
|                     | Good Surface Finish<br>Low to No Water Absorption    |              |  |  |
|                     |  |              |  |  |
|                     | Medium Heat Resistance<br>Renewable Resource Content |              |  |  |
|                     |  |              |  |  |
|                     |  |              |  |  |
| Uses                | Electrical/Electronic Applications Furniture         |              |  |  |
|                     |  |              |  |  |
|                     | Household Goods                                      |              |  |  |
|                     | Lighting Fixtures                                    |              |  |  |
|                     | Musical Instruments                                  |              |  |  |
|                     | Reinforced Panels                                    |              |  |  |
|                     |  |              |  |  |
| Appearance          | Colors Available                                     |              |  |  |
|                     | Matte Finish   | Matte Finish |  |  |
|                     | Natural Color  |              |  |  |
|                     | Titanium   |              |  |  |
|                     |  |              |  |  |
| Processing Method   | Press Molding  |              |  |  |
| Physical            | Nominal Value  | Unit         |  |  |
| Density             | 0.500  | g/cm³        |  |  |
| Mechanical          | Nominal Value  | Unit         |  |  |

| Tensile Modulus                | 1500          | MPa   |
|--------------------------------|---------------|-------|
| Tensile Stress (Yield)         | 7.00          | MPa   |
| Flexural Stress                | 17.0          | MPa   |
| Impact                         | Nominal Value | Unit  |
| Notched Izod Impact Strength   | 1.0           | kJ/m² |
| Unnotched Izod Impact Strength | 2.0           | kJ/m² |
| Additional Information         | Nominal Value | Unit  |
| Impact Modulus                 | 1.80          | GPa   |

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