

# STANDARD ENGINEERING INSTRUCTION

## DSM 3.9.41

### TPUAS9

#### 1. Definition:

The phenomenon of electrostatic charging has been known a long time. There are two ways to combat electrostatic charges. One is to improve the release of electrons. This can be achieved by higher air humidity, by blowing with ionized air or by using conductive tensioning pulleys. In toothed belt drives, However the continuous transfer of electrons through the tooth engagement is strong that these measures have little effect. More Effective is antistatic treatment of the timing belts which improves the mobility of electrons.

#### 2. ASMPT Applications:

Timing belts and Profiles

#### 3. Product Characteristics:

- **Shore hardness A 85**
- Antistatically treated thermoplastic polyurethane.
- Good oil and grease resistance.
- Colour: transparent.
- Temperature range: +5°C to +50°C.

#### Mechanical Properties (23°C / 50% Rel. Humidity)

| Characteristic                 | Test Condition  | Standard                          | Unit              | Value                                                     |
|--------------------------------|-----------------|-----------------------------------|-------------------|-----------------------------------------------------------|
| Shore Hardness A               |                 | DIN 53505                         |                   | 85                                                        |
| Shore Hardness D               |                 | DIN 53505                         |                   | 32                                                        |
| Tensile Strength               |                 | DIN 53504                         | MPa               | 50                                                        |
| Elongation At Break            |                 | DIN 53504                         | %                 | 500                                                       |
| Voltage At 100%                |                 | DIN 53504                         | MPa               | 6.0                                                       |
| Voltage At 300%                |                 | DIN 53504                         | MPa               | 13                                                        |
| Tear Resistance                |                 | DIN 53515                         | N/mm              | 70                                                        |
| Abrasion Loss                  |                 | DIN 53516                         | mm <sup>3</sup>   | 30                                                        |
| Compression Set                | 70 h; 23°C      | DIN 53617                         | %                 | 25                                                        |
| Compression Set                | 24 h; 70°C      | DIN 53617                         | %                 | 50                                                        |
| Surface Resistance             | (20°C/40% r.F.) | ISO 9563 /<br>DIN EN<br>61340-5-1 |                   | 10*10 <sup>6</sup> to 50*10 <sup>6</sup><br>new condition |
| <b>Other Properties (23°C)</b> |                 |                                   |                   |                                                           |
| Density                        |                 | DIN 53479                         | kg/m <sup>3</sup> | 1200                                                      |

**\*\*These properties are part of the CAMPUS plastics database and are based on the internationally established catalogue of basic data for plastics ISO 13350.\*\***

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