

## D-RIM® 1500:001 dissipative



### APPLICATIONS

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Teknikum D-RIM® is a plastic material developed to fulfil the *Electrostatic Discharge (ESD)* protection requirements in chemical and electronic industries. It is great for machine parts, jigs, palettes, inlets, slide beams and parts that replace metal and plastic.

The material is based on polyamide and is therefore very strong mechanically. This enables a very wide range of use. It is easy to machine one-off jigs, machine parts and small-scale series from the standard plates.

In ESD protected areas, its surface resistance is  $1 \times 10^6 - 1 \times 10^8$  Ohm.

When the smallest details are completed by machining, cost-efficient means of manufacturing are achieved. Also, the mould expenses are cost-efficient because the material can be processed with a low-pressure technique.

Teknikum can supply custom D-RIM® products manufactured by injection moulding.

### ADVANTAGES

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- Stiff, hard, impact resistant, withstands mechanical fatigue and wearing.

- Very strong mechanically
- Easy to machine
- A fully recyclable plastic material

### TECHNICAL PROPERTIES

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#### Structure

- Polyamide based plastic

#### Temperature range

- 50°C... +170°C

Heat resistance in tough mechanical stress is approximately 80°C. Under lower stress it is approximately 155°C.

#### Electrical conductivity

- Provides ESD protection

#### About ESD

With manufacturing sensitive products in electronics industry, it's typical that uncontrolled static dissipations can cause hidden damage to the product during production. Hidden damage in any component can cause a breakdown of the entire end-product at any time.

To prevent this damage, the electronic industry has been using ESD materials that dissipate the static loads to the ground without damaging the components.

### MANUFACTURER

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#### More information

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## PROPERTIES

<b>Hardness</b>	75+/-5 ShD
<b>Operational temperature</b>	
• <b>Long-term</b>	+80°C
• <b>Short-term</b>	+170°C
• <b>Cold</b>	-50°C
<b>Raw material</b>	Polyamide
<b>Manufacturing</b>	Low-pressure cast
<b>Surface resistance (IEC 61340-5-1)</b>	1x10 <sup>6</sup> - 1x10 <sup>8</sup> Ω
<b>Volume resistivity (IEC 61340-5-1)</b>	1x10 <sup>6</sup> - 1x10 <sup>8</sup> Ωcm

The materials have been developed and tested in co-operation with VTT Automation.

## D-RIM PROSESSING INSTRUCTIONS

<b>Processing method</b>	<b>Speed m/min</b>	<b>Taper angle °</b>	<b>Cutting angle °</b>
Drilling	120	10	-
Lathe work	100-800	10	30-45
Sawing	1000	25	15
Milling	1000	20	20

Note: Cutting oil should be used to preserve the dissipative properties.

## ORDER REFERENCE

- NDR10 (500x500x10mm)
- NDR20 (500x500x20mm)
- NDR30 (500x500x30mm)
- NDR60 (480x500x60mm)

Standard plates, thickness tolerance +1...2 mm