

## Material Specification

### M43

**Modified Thermoplastic Polyurethane TPU  
Injection Molded Grade**

Material Specification					
Created: JDK	Date: 2/3/2010	Revision: -	Released:	Material Code: M56	Description: Inj. Mold TPU

**1. Scope**

This document describes property requirements for a material suitable for use in high-pressure hydraulic sealing applications.

**2. Specification**

<b>Property</b>	<b>Spec</b>	<b>Value</b>
<b>Hardness</b>	DIN 53505	95A ±5
<b>Hardness</b>	DIN 53505	48D ±5
<b>Density</b>	DIN 53479	1.21 g/cm <sup>3</sup>
<b>Tensile Strength</b>	DIN 53504	55 N/mm <sup>2</sup>
<b>Ultimate Elongation</b>	DIN 53504	400%
<b>20% Modulus</b>	DIN 53504	6 N/mm <sup>2</sup>
<b>100% Modulus</b>	DIN 53504	16 N/mm <sup>2</sup>
<b>300% Modulus</b>	DIN 53504	35 N/mm <sup>2</sup>
<b>Tear Strength</b>	DIN 53515	150 N/mm <sup>2</sup>
<b>Abrasion</b>	DIN 53516	35mm <sup>3</sup>
<b>Compression Set 23C @ 70 Hrs</b>	DIN 53517	22%
<b>Compression Set 70C @ 24 Hrs</b>	DIN 53517	35%
<b>Brittle Point</b>	DIN 53513	-40°C
<b>Color</b>		Red

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**3: Test Parameters**

Hardness	DIN 53505
Hardness	DIN 53505
Density	DIN 53479
Tensile Strength	DIN 53504
Ultimate Elongation	DIN 53504
20% Modulus	DIN 53504
100% Modulus	DIN 53504
300% Modulus	DIN 53504
Tear Strength	DIN 53515
Abrasion	DIN 53516
Compression Set 23C @ 70 Hrs	DIN 53517
Compression Set 70C @ 24 Hrs	DIN 53517
Brittle Point	DIN 53513

**4: Revisions**

**Revision:**  
**Date:**  
**Written By:**  
**Approved:**  
**Date Approved**  
**Reason:**

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