

FKM

HNBR

VMQ

TPU

TPV

Elastomers and Thermoplastic Elastomers

The tough solution for diverse applications

Continental

Specialists in Developing Tough Products for Industry.

Continental has extensive know-how in the material development and finishing of rubber and plastics. High R&D capabilities and state-of-the-art technologies ensure standard products as well as tailor-made solutions with constantly high quality. They confirm Continental as a specialist in extruded and moulded components. As such, Continental is able to manufacture and finish high-quality materials.



Contents

| Material | Page |
|---------------------------------|------|
| › TPV-EPDM+PP (DACE7590) | 4 |
| › TPV-EPDM+PP (DACE9090) | 5 |
| › TPV-EPDM+PP (DDCE4090) | 6 |
| › TPV-EPDM+PP (DDCE5090) | 7 |
| › TPU (DTDU9091) | 8 |
| › FKM (DBDF6490) | 9 |
| › FKM (DBDF5254) | 10 |
| › FKM (DBAF7090) | 11 |
| › VMQ (DCTS6006) | 12 |
| › VMQ (DCTS6090) | 13 |
| › VMQ (DNBS6030) | 14 |
| › HNBR (DFAT5390) | 15 |



Material

TPV-EPDM+PP

(DACE7590)

Recyclable, economical standard material that can be processed thermoplastically.

Benefits:

- › Density < 1.0 g/cm³
- › Resistance to liquids and chemicals
- › Low-temperature properties
- › Ozone resistance
- › Resistance to hot air

Application:

- › Steering boots
- › Shock absorber boots
- › Cooling water hoses

Material data DACE7590

| Property | Test method | DACE7590 |
|---|-------------------|------------------------|
| Density | ISO 2781 | 0.97 g/cm ³ |
| Shore hardness | ISO 7619 | 79 Shore A |
| Tensile strength | ISO 37 | 12.6 N/mm ² |
| Elongation at break | ISO 37 | 590 % |
| Tension value σ_{100} | ISO 37 | 3.8 N/mm ² |
| Tear strength (strip specimen) | ISO 34-1 Method A | 12.4 N/mm |
| Compression set (24 h / 70°C) | ISO 815-1 | 47 % |
| Weight after immersion in oil IRM 903 (24 h at 125°C) | ISO 817 | +76 % |
| Color | - | Black |

The details were determined using injection-molded test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

TPV-EPDM+PP

(DACE9090)

Recyclable, economical standard material that can be processed thermoplastically.

Benefits:

- › Density < 1.0 g/cm³
- › Resistance to liquids and chemicals
- › Low-temperature properties
- › Ozone resistance
- › Resistance to hot air

Application:

- › Steering boots
- › Shock absorber boots
- › Cooling water hoses
- › Hoses (SCR hoses),
e.g. for ADBLue

Material data DACE9090

| Property | Test method | DACE9090 |
|---|-------------------|------------------------|
| Density | ISO 2781 | 0.96 g/cm ³ |
| Shore hardness | ISO 7619 | 35 Shore D |
| Tensile strength | ISO 37 | 18.3 N/mm ² |
| Elongation at break | ISO 37 | 614 % |
| Tension value σ_{100} | ISO 37 | 7.5 N/mm ² |
| Tear strength (strip specimen) | ISO 34-1 Method A | 31.0 N/mm |
| Compression set (24 h / 70°C) | ISO 815-1 | 68 % |
| Weight after immersion in oil IRM 903 (24 h at 125°C) | ISO 817 | 55 % |
| Color | - | Black |

The details were determined using injection-molded test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

TPV-EPDM+PP

(DDCE4090)

Recyclable, economical standard material that can be processed thermoplastically.

Benefits:

- › Density < 1.0 g/cm³
- › Resistance to liquids and chemicals
- › Low-temperature properties
- › Ozone resistance
- › Resistance to hot air

Application:

- › Steering boots
- › Shock absorber boots
- › Cooling water hoses

Material data DDCE4090

| Property | Test method | DDCE4090 |
|---|-------------------|------------------------|
| Density | ISO 2781 | 0.96 g/cm ³ |
| Shore hardness | ISO 7619 | 39 Shore D |
| Tensile strength | ISO 37 | 20.6 N/mm ² |
| Elongation at break | ISO 37 | 619 % |
| Tension value σ_{100} | ISO 37 | 8.7 N/mm ² |
| Tear strength (strip specimen) | ISO 34-1 Method A | 39.1 N/mm |
| Compression set (24 h / 70°C) | ISO 815-1 | 69 % |
| Weight after immersion in oil IRM 903 (24 h at 125°C) | ISO 817 | 50 % |
| Color | - | Black |

The details were determined using injection-molded test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

TPV-EPDM+PP

(DDCE5090)

Recyclable, economical standard material that can be processed thermoplastically.

Benefits:

- › Density < 1.0 g/cm³
- › Resistance to liquids and chemicals
- › Low-temperature properties
- › Ozone resistance
- › Resistance to hot air

Application:

- › Steering boots
- › Shock absorber boots
- › Cooling water hoses
- › Stops (e.g. for pedals)

Material data DDCE5090

| Property | Test method | DDCE5090 |
|---|-------------------|------------------------|
| Density | ISO 2781 | 0.95 g/cm ³ |
| Shore hardness | ISO 7619 | 51 Shore D |
| Tensile strength | ISO 37 | 29.4 N/mm ² |
| Elongation at break | ISO 37 | 764 % |
| Tension value σ_{100} | ISO 37 | 14.6 N/mm ² |
| Tear strength (strip specimen) | ISO 34-1 Method A | 56.1 N/mm |
| Weight after immersion in oil IRM 903 (24 h at 125°C) | ISO 817 | 50 % |
| Color | - | Black |

The details were determined using injection-molded test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

TPU

(DTDU9091)

Can be processed thermoplastically - recyclable and optimized for boots with highly resilient convoluted sections.

Benefits:

- › High-level mechanical properties
- › Low abrasion
- › Dynamic load capacity
- › Compression set
- › Resistance to greases, oils and liquids
- › Ozone and hydrolysis resistance
- › Resilience in convoluted boots

Application:

- › Blow-moulded convoluted boots for air springs
- › Extruded profiles / seal elements

Material data DTDU9091

| Property | Test method | DTDU9091 | Hydrolysis, 21 days at 85°C |
|-----------------------------------|----------------------|------------------------|--------------------------------|
| Density | ISO 2781 | 1.11 g/cm ³ | - |
| Shore hardness | ISO 7619 | 91 Shore A | - |
| Tensile strength | ISO 37 | 51.7 N/mm ² | 38.3 N/mm ² |
| Elongation at break | ISO 37 | 539 % | 667 % |
| Tension value σ_{100} | ISO 37 | 8.5 N/mm ² | 7.0 N/mm ² |
| Tear strength (strip specimen) | ISO 34-1 Method A | 34.8 N/mm | - |
| Compression set (24 h / 70°C) | ISO 815-1 | 36.4 % | - |
| Color | - | Black | - |

The details were determined using injection-molded test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

FKM

(DBDF6490)

Elastomer with low settling, high temperature and chemical resistance.

Benefits:

- › Resistance to high temperatures
- › Oil and grease resistance
- › Resistance to FAM-B fuel

Application:

- › Carburetor manifold
- › Seal elements

Material data DBDF6490

| Property | Test method | DBDF6490 |
|--------------------------------|-------------------|------------------------|
| Density | ISO 2781 | 1.83 g/cm ³ |
| Shore hardness | ISO 7619 | 66 Shore A |
| Tensile strength | ISO 37 | 12.5 N/mm ² |
| Elongation at break | ISO 37 | 357 % |
| Tear strength (strip specimen) | ISO 34-1 Method A | 6.1 N/mm |
| Compression set (24 h / 70°C) | ISO 815-1 | 16 % |
| Color | - | Black |

The details were determined using vulcanized test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

FKM

(DBDF5254)

Elastomer with low settling, high temperature and chemical resistance.

Benefits:

- › Resistance to high temperatures
- › Oil and grease resistance
- › Resistance to FAM-B fuel

Application:

- › Injection-moulded tank hoses
- › Injection-moulded hoses
- › Seal elements

Material data DBDF5254

| Property | Test method | DBDF5254 |
|--------------------------------|-------------------|------------------------|
| Density | ISO 2781 | 1.93 g/cm ³ |
| Shore hardness | ISO 7619 | 52 Shore A |
| Tensile strength | ISO 37 | 9.4 N/mm ² |
| Elongation at break | ISO 37 | 514 % |
| Tear strength (strip specimen) | ISO 34-1 Method A | 5.5 N/mm |
| Compression set (24 h / 70°C) | ISO 815-1 | 24 % |
| Color | - | Green |

This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

FKM

(DBAF7090)

Elastomer with low settling, high temperature and chemical resistance.

Benefits:

- › Resistance to high temperatures
- › Oil and grease resistance
- › Resistance to FAM-B fuel
- › Low-temperature properties

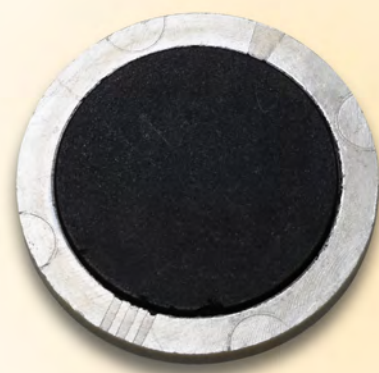
Application:

- › Seal elements
- › Damping elements
- › 2-component manufacturing

Material data DBAF7090

| Property | Test method | DBAF7090 |
|--------------------------------|-------------------|------------------------|
| Density | ISO 2781 | 1.82 g/cm ³ |
| Shore hardness | ISO 7619 | 71 Shore A |
| Tensile strength | ISO 37 | 18.6 N/mm ² |
| Elongation at break | ISO 37 | 270 % |
| Tear strength (strip specimen) | ISO 34-1 Method A | 10.8 N/mm |
| Compression set (24 h / 70°C) | ISO 815-1 | 13 % |
| Color | - | Black |

The details were determined using vulcanized test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

VMQ

(DCTS6006)

Elastomer with low settling and a wide operating temperature range.

Benefits:

- › Resistance to high temperatures
- › Low-temperature properties
- › Can be calendered
- › Can be dyed in a wide range of colors

Application:

- › Seal elements
- › Expansion fittings

Material data DCTS6006

| Property | Test method | DCTS6006 |
|--|----------------------|------------------------|
| Density | ISO 2781 | 1.18 g/cm ³ |
| Shore hardness | ISO 7619 | 61 Shore A |
| Tensile strength | ISO 37 | 11.0 N/mm ² |
| Elongation at break | ISO 37 | 520 % |
| Tear strength (angle test specimen) | ISO 34-1 Method B | 17.4 N/mm |
| Compression set (24 h / 175°C) | ISO 815-1 | 18 % |
| Color | - | White |

The details were determined using vulcanized test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

VMQ

(DCTS6090)

Elastomer with low settling and a wide operating temperature range.

Benefits:

- › Resistance to high temperatures
- › Low-temperature properties
- › Can be calendered
- › Can be dyed in a wide range of colors

Application:

- › Seal elements
- › Expansion fittings

Material data DCTS6090

| Property | Test method | DCTS6090 |
|--|----------------------|------------------------|
| Density | ISO 2781 | 1.18 g/cm ³ |
| Shore hardness | ISO 7619 | 61 Shore A |
| Tensile strength | ISO 37 | 11.1 N/mm ² |
| Elongation at break | ISO 37 | 537 % |
| Tear strength (angle test specimen) | ISO 34-1 Method B | 16.9 N/mm |
| Compression set (24 h / 175°C) | ISO 815-1 | 24 % |
| Color | - | Black |

The details were determined using vulcanized test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

VMQ

(DNBS6030)

Elastomer with low settling and a wide operating temperature range.

Benefits:

- › Resistance to high temperatures up to 300°C

Application:

- › Seal elements
- › Dust caps

Material data DNBS6030

| Property | Test method | DNBS6030 |
|--------------------------------|-------------|------------------------|
| Density | ISO 2781 | 1.17 g/cm ³ |
| Shore hardness | ISO 7619 | 59 Shore A |
| Tensile strength | ISO 37 | 9.2 N/mm ² |
| Elongation at break | ISO 37 | 392 % |
| Compression set (24 h / 175°C) | ISO 815-1 | 11 % |
| Color | - | Red-brown |

The details were determined using vulcanized test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



Material

HNBR

(DFAT5390)

Elastomer with low settling.

Benefits:

- › Oil and grease resistance
- › Low-temperature properties
- › Compression set

Application:

- › Spring elements
- › Seal elements

Material data DFAT5390

| Property | Test method | DFAT5390 |
|--|----------------------|------------------------|
| Density | ISO 2781 | 1.12 g/cm ³ |
| Shore hardness | ISO 7619 | 54 Shore A |
| Tensile strength | ISO 37 | 9.6 N/mm ² |
| Elongation at break | ISO 37 | 223 % |
| Tear strength (angle test specimen) | ISO 34-1 Method B | 8.1 N/mm |
| Compression set (22 h / 150°C) | ISO 815-1 | 13 % |
| Color | - | Black |

The details were determined using vulcanized test slabs. This information is based on current knowledge. It does not imply any legally binding guarantee of particular properties.



ContiTech Vibration Control GmbH

29451 Dannenberg, Germany

Christof Feldmann
Material Development
Phone +49 (0)5861 806 276
christof.feldmann@vc.contitech.de

Stefan Raschdorf
Key Account Management
Phone +49 (0)5551 702 133
stefan.raschdorf@vc.contitech.de

For further information:
www.continental-industry.com



Legal notice

The content of this publication is not legally binding and is provided as information only. The trademarks displayed in this publication are the property of Continental AG and/or its affiliates. Copyright © 2020 ContiTech AG. All rights reserved. For complete information go to: www.continental-industry.com/discl_en