

Polyolefins technical information



- **HPDE - NATURAL**
- **HDPE – BLACK**
- **HDPE – TWIN WALL**
- **PP – GREY**
- **PP – NATURAL**
- **PVC – DARK GREY**
- **UHMWPE – NATURAL**
- **UHMWPE – BLACK**
- **UHMWPE – GREEN**

SIMONA

PE-HWST

HDPE Natural (SHDPENT) - High-heat resistant polyethylene

normal flammability Physiologically safe according to German Federal Certification: Institute for risk valuation (BfR) and FDA Approved for contact with food in accordance with LMBG and EC Regulation 1935/2004

- Application:
- Chemical apparatus and tank/vessel construction
 - Transport and storage industry
 - Bulk commodities industry

- Food industry

Product type:



Overview material specifications PE-HWST

Density (g/cm ³) ISO 1183	0,947
Yield stress (MPa) DIN EN ISO 527	21
Temperature range (°C)	-50 to +80
Elongation at break (%) DIN EN ISO 527	500
Tensile modulus of elasticity (MPa) DIN EN ISO 527	800
Notched impact strength (kJ/m ²) DIN EN ISO 179	13

All specifications are deemed to be approximate values and may vary depending on the processing methods used and the specimen or test piece. In general, data specified applies to average values measured on extruded sheets with a thickness of 4mm. Deviations from the values specified are possible if the sheets in this thickness are not available. Information presented herein cannot necessarily be applied to finished items or products. Suitability of materials for a specific field of application must be assessed by the party responsible for processing or the end-user. All technical specifications presented herein are designed merely to provide assistance in terms of project planning. Under no circumstances do they constitute a guaranteed property or quality of the items presented.

PE-HWU

SIMONA

HDPE Black (SHDPEBK) - High-heat resistant polyethylene, UV-stabilized

normal flammability Physiologically safe according to German Federal Certification: Institute for risk valuation (BfR) Approved for contact with food in accordance with LMBG and EC Regulation 1935/2004

- Application:
- Chemical apparatus and tank construction
 - Transport and storage industry

- Thermoforming sector

Product
type:



Overview material specifications PE-HWU

Density (g/cm ³) ISO 1183	0,955
Yield stress (MPa) DIN EN ISO 527	22
Temperature range (°C)	-50 to +80
Elongation at break (%) DIN EN ISO 527	300
Tensile modulus of elasticity (MPa) DIN EN ISO 527	800
Notched impact strength (kJ/m ²) DIN EN ISO 179	12

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PE-HKP

SIMONA

HDPE Black - Hollow sheets made of PE 80 feature a light-weight construction and very high levels of rigidity

normal flammability Physiologically safe according to German Federal Certification: Institute for risk valuation (BfR) Approved for contact with food in accordance with LMBG and EC Regulation 1935/2004

Application: • Chemical apparatus and tank construction

- Transport and storage industry

Product
type:



Overview material specifications PE-HKP

Density (g/cm ³) ISO 1183	NA
Yield stress (MPa) DIN EN ISO 527	NA
Temperature range (°C)	-50 to +80
Elongation at break (%) DIN EN ISO 527	NA
Tensile modulus of elasticity (MPa) DIN EN ISO 527	NA
Notched impact strength (kJ/m ²) DIN EN ISO 179	NA

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PP-DWU

SIMONA

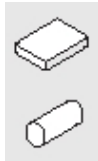
PP Grey (SPPHGY) - Homopolymer, permanent-heat resistant

normal flammability Physiologically safe according to German Federal Certification: Institute for risk valuation (BfR) and FDA Approved for contact with food in accordance with LMBG and EC Regulation 1935/2004

- Application:
- Chemical apparatus and tank/vessel construction
 - Printing and textile industry
 - Electroplating

- Laboratory construction
- Food industry

Product type:



Overview material specifications PP-DWU

Density (g/cm ³) ISO 1183	0,915
Yield stress (MPa) DIN EN ISO 527	32
Temperature range (°C)	0 to +100
Elongation at break (%) DIN EN ISO 527	70
Tensile modulus of elasticity (MPa) DIN EN ISO 527	1400
Notched impact strength (kJ/m ²) DIN EN ISO 179	7

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PP-DWST

SIMONA

PP Natural (SPPHNT) - Homopolymer, permanent-heat resistant

normal flammability Physiologically safe according to German Federal Certification: Institute for risk valuation (BfR) and FDA Approved for contact with food in accordance with LMBG and EC Regulation 1935/2004

- Application:
- Chemical apparatus and tank/vessel construction
 - Textile industry
 - Food industry

- Laboratory construction

Product type:



Overview material specifications PP-DWST

Density (g/cm ³) ISO 1183	0,905
Yield stress (MPa) DIN EN ISO 527	30
Temperature range (°C)	0 to + 100
Elongation at break (%) DIN EN ISO 527	70
Tensile modulus of elasticity (MPa) DIN EN ISO 527	1400
Notched impact strength (kJ/m ²) DIN EN ISO 179	7

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PVC-CAW

SIMONA

PVC Dark Grey (SPVCGY) - Normal impact strength, chemically resistant

DIN 4102 B1 low flammability up to 4 mm PVC-U, Group 2 in
 Certification: accordance with ISO 11833-1 (normal impact strength) UL 94 V-0 low flammability from 1 mm

Application:

- Chemical apparatus and tank/vessel construction
- Mechanical engineering and installation construction

Product
type:



Overview material specifications PVC-CAW

Density (g/cm ³) ISO 1183	1,440
Yield stress (MPa) DIN EN ISO 527	58
Temperature range (°C)	0 to +60
Elongation at break (%) DIN EN ISO 527	15
Tensile modulus of elasticity (MPa) DIN EN ISO 527	> 3000
Notched impact strength (kJ/m ²) DIN EN ISO 179	4

Data relating to sheet density may vary depending on the specific product formula, thickness and coloration. If in doubt, please contact us for further details. All specifications are deemed to be approximate values and may vary depending on the processing methods used and the specimen or test piece. In general, data specified applies to average values measured on extruded sheets with a thickness of 4mm. Deviations from the values specified are possible if the sheets in this thickness are not available. Information presented herein cannot necessarily be applied to finished items or products. Suitability of materials for a specific field of application must be assessed by the party responsible for processing or the end-user. All technical specifications presented herein are designed merely to provide assistance in terms of project planning. Under no circumstances do they constitute a guaranteed property or quality of the items presented.

PE-1000

SIMONA

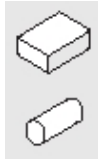
UHMWPE Natural (SUHPENT), Black (SUHPEBK) & Green (SUHPEGR) - High impact strength and wear resistance

Certification: normal flammability Physiologically safe according to German Federal Institute for risk valuation (BfR)

- Application:
- Packaging and filling installations
 - Materials handling and storage systems
 - Bulk commodities industry

- Apparatus and tank construction
- Port construction
- Printing and textile industry

Product type:



Overview material specifications PE-1000

Density (g/cm ³) ISO 1183	0,930
Yield stress (MPa) DIN EN ISO 527	>= 17
Temperature range (°C)	-260 to +80
Elongation at break (%) DIN EN ISO 527	>50
Tensile modulus of elasticity (MPa) DIN EN ISO 527	>= 700
Notched impact strength (kJ/m ²) DIN EN ISO 179	>= 200

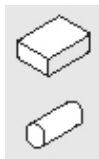
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Plastef - V

PTFE – Virgin Grade Polytetrafluoroethylene

Certification:	FDA approval
Application:	<ul style="list-style-type: none"> • Valve inserts • Hydraulic Seals • O-Rings • Bellows

Product type:



Overview material specifications Plastef - V

Density (g/cm ³) ISO 1183	2.170
Tensile Strength (MPa)	28
Continuous Operating Temperature (°C)	260
Elongation (%)	300
Flammability	530
Flash Point (°C)	
Co-Efficient of Friction Polished Steel 23°C	Static = 0.07 Dynamic = 0.06

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