TECHNICAL DATA SHEET

POLYPROPYLENE TIPPLEN H 543 F
Homopolymer for extrusion applications

TIPELIN / TIPOLEN / TIPPLEN / TATREN / BRALEN+
The joint product portfolio of MOL Petrochemicals and Slovnaft provides infinite opportunities

DESCRIPTION
TIPPLEN H 543 F is a homopolymer polypropylene with medium molecular weight, good mechanical properties and outstanding processability. This grade shows low water carry-over due to its special stabilization.

APPLICATIONS
TIPPLEN H 543 F is recommended for split film yarns for ropes and twines, monofilaments. Film yarns are used e.g. in brush, broom filling and technical applications. This grade is also recommended for cast films and sheets, furthermore for injection moulded products (such as caps, household articles, packaging materials).
TIPPLEN H 543 F is also recommended for cast and blown films, stiff sheets for thermoforming of cups, packaging of dairy products and fruit-trays.

TIPPLEN H 543 F is suitable for food contact. The product complies with Food Contact Regulations.

PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Test method</th>
<th>Unit</th>
<th>Typical value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFR (230 °C /2.16 kg)</td>
<td>ISO 1133-1</td>
<td>g/10 min</td>
<td>4.0</td>
</tr>
<tr>
<td>Flexural Modulus *</td>
<td>ISO 178</td>
<td>MPa</td>
<td>1700</td>
</tr>
<tr>
<td>Modulus of Elasticity in Tension *</td>
<td>ISO 527-1,2</td>
<td>MPa</td>
<td>1600</td>
</tr>
<tr>
<td>Tensile Strength at Yield *</td>
<td>ISO 527-1,2</td>
<td>MPa</td>
<td>38</td>
</tr>
<tr>
<td>Tensile Strain at Yield *</td>
<td>ISO 527-1,2</td>
<td>%</td>
<td>9</td>
</tr>
<tr>
<td>Izod Impact Strength (notched, 23 °C) *</td>
<td>ISO 180/A</td>
<td>kJ/m²</td>
<td>5</td>
</tr>
<tr>
<td>HDT (0.45 MPa) *</td>
<td>ISO 75-1,2</td>
<td>°C</td>
<td>105</td>
</tr>
<tr>
<td>Rockwell Hardness *</td>
<td>ISO 2039/2</td>
<td>R scale</td>
<td>101</td>
</tr>
</tbody>
</table>

Typical properties, not to be used as specification.
* Average mechanical property values of several measurements carried out on standard injection-moulded test specimens prepared in accordance with ISO 1872-2.

PROCESSING
TIPPLEN H 543 F can be used in conventional extrusion and injection moulding machines. Recommended processing temperatures are 190 – 240 °C.
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**STORAGE AND HANDLING**
Pellets are packed in 25 kg PE-LD bags and transported on stretch or shrink-wrapped pallets at eligible load of polymer 1375 kg. Heat treated pallets are available as well. We use adhesive between the bags in order to avoid their slipping. Pay attention to this fact during the removing of the bags from the pallets. The preferred method is to lift the bag at first without rotation. Transportation in a road silo or rail silo is also available. For more detailed information please contact SLOVNAFT and MOL Petrochemicals sales representative.

Since polypropylene is a combustible substance, the fire safety rules applicable for combustible materials in warehouses and store rooms should be observed.
If polymer is stored in conditions of high humidity and fluctuating temperatures, then atmospheric moisture can condense inside the packing. If it happened, it is recommended the pellets to be dried before use. During the storage polypropylene should not be exposed to UV radiation and temperatures above 40°C. Producer does not take responsibility for any damages caused by adverse storage.

**REACH STATEMENT**
Polymers are exempt of REACH registration. However, their raw materials which mean monomers and relevant additives have been registered. MOL Petrochemicals is committed to fully respect legislation and will only use REACH compliant raw materials. At this point in time TIPPLEN does not contain any substances specifically identified as SVHC at levels greater than 0.1%.

**SAFETY**
See MSDS.

**RECYCLING**
POLYPROPYLENE resins are suitable for recycling using modern recycling methods.
In-house production waste should be kept clean to facilitate direct recycling.

**DISCLAIMER**
The information provided in this publication has been compiled to the best of our present knowledge. However, in view of the various applications of polypropylene resins and the equipment used, the processing conditions may differ.
The recommendations and data herein are to be construed as informational only and do not relieve users from carrying out their own tests and experiments prior to processing in order to check suitability for a specific use. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed. Our products are under continuous development, therefore we reserve the right to change the information presented in this brochure at our own discretion.
The REACH statement herein does not constitute legal advice. The REACH statement is provided for informational purpose only.
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MANUFACTURER
MOL Petrochemicals Co. Ltd.
Address: H-3581 Tiszaújváros,
P.O. Box: 20
Hungary

Internet: http://mol.hu/en/polymers/products

SALES ORGANIZATION
SLOVNAFT, a.s.
Address: Vlčie hrdlo 1
824 12 Bratislava
Slovak Republic

Telephone: +421 2 5859 7515
+421 2 5859 7622
+421 2 5859 7741
+421 2 5859 7231

E-mail: polymersales@slovnaft.sk

TECHNICAL SERVICE
MOL Plc.
Polymer Technical Service MOL
Address: H-3581 Tiszaújváros,
P.O. Box: 20
Hungary

Telephone: +36 49 521 540
+36 49 522 607
Fax: +36 49 886 491
E-mail: pts@mol.hu

SALES ORGANIZATION
MOL Plc.
Domestic Polymer Sales MOL
Address: H-3581 Tiszaújváros,
P.O. Box: 20
Hungary

Telephone: +36 49 521 355
Fax: +36 49 886 491
E-mail: polymersales@mol.hu

SALES ORGANIZATION
MOL Germany GmbH.
Address: Im Trutz Frankfurt 49
D-60322 Frankfurt am Main Germany

Telephone: +49 69 154 04 0
Fax: +49 69 154 04 41
E-mail: polymersales@molgermany.de

SALES ORGANIZATION
MOL- Austria Handels GmbH.
Address: Walcherstrasse 11A
7. Stock
A-1020 Wien
Austria

Telephone: +43 1 211 20 1120
Fax: +43 1 211 20 1198
E-mail: JHauk@molaustria.at
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TVK Italia S.r.l.
Address: Via Teulié, 1 20136 Milano Italy
Telephone: +39 02 58 30 5523
Fax: +39 02 58 30 3492
E-mail: tvkitaly@it.tvk.eu

French Liaison Representative
Address: Paris France
Telephone: +33 1 64 32 44 17
Mobile Phone: +33 7 89 86 10 64
E-mail: husson.iren@fr.tvk.eu

MOL Ukraine LLC.
Address: 04655 Kiev Moskovskiy ave. 23 7th floor Ukraine
Telephone: +380 44 374 00 80
Fax: +380 44 374 00 90
E-mail: JZavojko@mol-ukraine.com.ua

SLOVNAFT Polska S.A.
PetChem Department
Address: ul. Postępu 17D 02-676 Warszawa Poland
Telephone: +48 22 545 70 70
Mobile Phone: +48 22 545 70 60
E-mail: petchem@slovnaft.pl

TIFON d.o.o.
Address: Savska cesta 41/XIII HR – 10000 Zagreb Croatia
Telephone: +385 1 6160 600
Fax: +385 1 6160 601
E-mail: polymersales@tifon.hr

SC. MOL Romania P.P. SRL
Address: Str. Danielopolu 4-6 ET2 Sector 1 Cod 014 134 Bucuresti Romania
Telephone: +40 21 204 85 00
Mobile Phone: +40 21 232 10 59
E-mail: petchem@molromania.ro

Other European Countries
Telephone: +36 49 521 355
+36 70 458 4563
+36 70 373 9209
Fax: +36 49 886 491
E-mail: polymersales@mol.hu

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