

TWO COLOURS



ONE DIRECTION

Polypropylene  
**TIPPLEN H 650 F**  
Homopolymer for BOPP film

\*\*\*\*\*

### Description

**TIPPLEN H 650 F** is a homopolymer polypropylene for the production of biaxially oriented films designed for high speed production. The grade does not contain any slip or antiblocking agents. The grade has low ash content.

### Applications

**TIPPLEN H 650 F** is Ca-stearate free is particularly suitable for metallization both in monolayer and in coextruded structures. BOPP films made from **TIPPLEN H 650 F** have good mechanical properties, high impact strength and puncture resistance even at low temperatures. The BOPP film forms an excellent barrier against moisture, oils and oxidation and features good optical properties. Monolayer or coextruded films with a thickness range of 0.01 – 0.04 mm are used for packaging.

**TIPPLEN H 650 F** is suitable for food contact and for manufacturing of pharmaceutical packing products. The product complies with Food Contact and Pharmaceutical Regulations.

### Properties

	Test method	Unit	Typical value
MFR (230 °C /2.16 kg)	ISO 1133	g/10 min	3
Flexural Modulus *	ISO 178	MPa	1700
Modulus of Elasticity in Tension *	ISO 527-1,2	MPa	1600
Tensile Strength at Yield *	ISO 527-1,2	MPa	35
Tensile Strain at Yield *	ISO 527-1,2	%	10
Izod Impact Strength (notched, 23 °C) *	ISO 180/1A	kJ/m <sup>2</sup>	5
HDT (0.46 N/mm <sup>2</sup> ) *	ISO 75-1,2	°C	96
Rockwell Hardness *	ISO 2039/2	R scale	96

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 1873-2.

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



Slovnaft  
PETROCHEMICALS



### Processing

**TIPPLEN H 650 F** can be used in conventional and high speed BOPP film extrusion machines. Recommended processing temperature 190 – 240 °C.

### Storage and Handling

Pellets are packed in 25 kg PE-LD bags and transported on shrink-wrapped pallets at eligible load of polymer 1375 kg. Heat treated pallets are available as well. Transportation in a road silo or rail silo is also available. For more detailed information please contact Slovnaft Petrochemicals and TVK 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. 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, catalysts and most additives have been pre-registered. SPC/TVK is committed to fully respect this new legislation and will only use REACH compliant raw materials. At this point in time SPC/TVK polypropylenes TATREN/TIPPLEN do 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 methods of shredding and cleaning.

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 equipments used, the processing conditions may differ.

The recommendations and data herein are to be construed as informative 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.

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



## MANUFACTURER

TVK Plc.  
Polymer Business Unit  
H-3581 Tiszaújváros,  
P.O. Box: 20  
Hungary  
Internet: <http://www.tvk.hu>  
E-mail: [tvkinfo@tvk.hu](mailto:tvkinfo@tvk.hu)

## CUSTOMER SERVICE

TVK Plc.  
Polymer Marketing and Sales  
Customer Service  
H-3581 Tiszaújváros,  
P.O. Box: 20  
Hungary  
Fax: + 36 49 521-186  
E-mail: [customerservice@tvk.hu](mailto:customerservice@tvk.hu)

### Customer service for PE

Telephone: + 36 49 521-367, + 36-80 204-249,

### Customer service for PP

Telephone: + 36 49 522-013, + 36-80 204-248

## SALES ORGANIZATION

TVK Plc.  
Polymer Marketing and Sales Department  
H-3581 Tiszaújváros,  
P.O. Box: 20  
Hungary  
Telephone: +36 49 521-355  
Fax: +36 49 522-410  
E-mail: [polymersales@tvk.hu](mailto:polymersales@tvk.hu)

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



**TVK Inter-Chemol GmbH.**

Felnerstrasse 5.  
D-60322 Frankfurt am Main  
Germany  
Telephone: +49 69 154 04 12  
Fax: +49 69 154 04 41  
E-mail: [gaboragoston@tvkic.de](mailto:gaboragoston@tvkic.de)

**TVK Italia S.r.L.**

Via P. Teulié 1.  
I-20136 Milano  
Italy  
Telephone: +39 02 5830 5523  
Fax: +39 02 5830 3492  
E-mail: [tvkitaly@energy.it](mailto:tvkitaly@energy.it)

**TVK-France**

182 Avenue Charles DeGaulle  
F-92200 Neuilly-sur-Seine  
France  
Telephone: +33 14 745 63 60  
Fax: +33 14 745 45 10  
E-mail: [kacsandi@free.fr](mailto:kacsandi@free.fr)  
[tvk.france@orange.fr](mailto:tvk.france@orange.fr)

**TVK Ukraine**

04128 Kiev  
ul. Tupoleva, 19, office 303  
Telephone: +380 44 374 00 80  
Fax: +380 44 374 00 90  
E-mail: [office@tvkukraine.eu](mailto:office@tvkukraine.eu)

**TVK Polska Sp. z o.o.**

ul. Wawozowa 23/12  
PL 02-796 Warszawa  
Poland  
Telephone: +48 22 545 70 70  
Fax: +48 22 545 70 60  
E-mail: [tvkpolska@tvkpolska.pl](mailto:tvkpolska@tvkpolska.pl)  
[www.tvkpolska.pl](http://www.tvkpolska.pl)

**MOL- Austria Handels GmbH.**

Gartenbaupromenade 2/6  
A-1010 Wien  
Austria  
Telephone: +43 1 515 99 1120  
+43 1 515 99 1121  
Fax: +43 1 513 37 55 1120  
+43 1 513 37 55 1121  
E-mail: [JHauk@MOL.hu](mailto:JHauk@MOL.hu)

**SC. MOL Romania P.P. SRL**

Str. Danielopolu 4-6  
ET2 Sector 1 Cod 014 134  
Bucuresti, Romania  
Telephone: +40 21 204 85 00  
+40 21 204 85 02  
Fax: +40 21 232 10 59  
E-mail: [ematei@molromania.ro](mailto:ematei@molromania.ro)  
[petchem@molromania.ro](mailto:petchem@molromania.ro)

**Other European Countries**

H-3581 Tiszaújváros  
P.O.B. 20.  
Telephone: +36 49 52 21 18  
Fax: +36 49 52 24 10  
E-mail: [plokai@tvk.hu](mailto:plokai@tvk.hu)

June 2009

TIPELIN TIPOLEN TIPPLEN TATREN BRALEN

The joint product portfolio of TVK and Slovnaft Petrochemicals provide infinite opportunities

MEMBERS OF THE MOL GROUP



Slovnaft  
PETROCHEMICALS

