



# TISZAI VEGYI KOMBINÁT RT.

PP BUSINESS UNIT

H-3581 Tiszaújváros, P.O.B.: 20 HUNGARY  
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 Company Registration Number: Cg. 05-10-000065

## TECHNICAL DATA SHEET OF TIPPLEN K 392

**TIPPLEN K 392** is a heterophasic copolymer polypropylene with ethylene content for injection moulding. **TIPPLEN K 392** offers high flow and excellent impact strength due to the ethylene content.

**TIPPLEN K 392** is well suited for household articles, bins, closures, toys, crates and trays, garden furnitures ...etc.

**TIPPLEN K 392** is suitable for food contact. The product complies with FDA and BGA norms.

Properties	Standard method	Unit	Value	
MFI 2.16 kg / 230°C	ISO 1133	g / 10 min	12	
	ASTM D 1238		(10 - 14)	
Tensile strength at yield	ISO 527	N/mm <sup>2</sup>	26	
	ASTM D 638		26	
Elongation at yield	ISO 527	%	6	
	ASTM D 638		7	
HDT - 0.46 N/mm <sup>2</sup>	ISO 75	°C	85	
	ASTM D 648			
Rockwell hardness	ISO 2039/2	R scale	70	
	ASTM D 785		70	
Flexural modulus of elasticity	Drawn	ISO 527	N/mm <sup>2</sup>	1100
	Bent	ASTM D 790	N/mm <sup>2</sup>	1200
Izod impact strength +23 °C	ISO 180/1A	kJ / m <sup>2</sup>	10	
	ASTM D 256		J / m	90
Izod impact strength -20 °C	ISO 180/1A	kJ / m <sup>2</sup>	4.5	
	ASTM D 256		J / m	45

- MFI measured at 230 °C under a load of 2.160 kg with standard nozzle having a diameter of 2.095 mm.
- Typical mechanical property values measured on standard injection moulded specimens (ASTM D 2146 and ISO 3167), conditioned at room temperature (ASTM D 618 procedure A and ISO 291).





## TISZAI VEGYI KOMBINÁT RT.

PP BUSINESS UNIT

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Company Registration Number: Cg. 05-10-000065

## CERTIFICATE

Grades: TIPPLEN H-781F	TIPPLEN H-649F	TIPPLEN H-535F
TIPPLEN H-543F	TIPPLEN H-528	TIPPLEN R-359
TIPPLEN K-593	TIPPLEN K-899	TIPPLEN K-499
TIPPLEN K-392	TIPPLEN K-299	TIPPLEN H-681F
TIPPLEN K-693	TIPPLEN R-654	TIPPLEN H-321A
TIPPLEN K-793	TIPPLEN K-597	TIPPLEN H-384F

We certify that above mentioned polypropylene granulates manufactured by Tiszai Vegyi Kombinát Ltd. Polypropylene Business Unit according to our experience complies with EEC 90/128, EEC 93/9, EEC 82/711, EEC 93/8, EEC 95/3 and EEC 96/11 European Directives and they don't contain any others matters.

They meet the requirements of the Code of Federal Regulations title 21, part 177 - 1520 used by FDA - Food and Drug Administration to regulate plastics for food contact applications.

Therefore may be used for production of articles coming in contact with foods.

TISZAI VEGYI KOMBINÁT RT.  
Polipropilén Üzletág  
Minőségellenőrzési Részleg

Tiszaújváros 25. 07. 2001.

Ferenc Kiss  
Head of Q.C. dept.



Nemzeti Minőségdíj  
Hungary 1999, 2000



## TISZAI VEGYI KOMBINÁT RT.

POLYMER BUSINESS UNIT PP Laboratory  
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Fax: 49 322 865 • Telex: 22-6419 Company Registration Number: Cg.: 05-10-000065

### CERTIFICATE of flammability

**Test method:** ISO 1210: Plastics - Determination of Burning Behavior of Horizontal Specimens in Contact with a Small Flame Ignition Source

**Tested sample:** TIPPLEN K 392 manufactured by Tiszai Vegyi Kombinát Ltd.

**Test results:**

Flammability degree of TIPPLEN K 392: HB

Burn rate on TIPPLEN K 392: 19.7 – 23.6 mm/min.

Average: 22 mm/min.

**Tested by:** Tiszai Vegyi Kombinát Rt. Polymer Business Unit PP laboratory

We could not measure according to UW, and TSH 5514 G-4 test methods.

Tiszaújváros, 13. 12. 2001.

TISZAI VEGYI KOMBINÁT RT.  
Polimer Üzletág  
Minőségellenőrzés, Terméktesztelés  
és Vevőszolgálat 05.

Ferenc Kiss  
Head of PP lab.

