

# Polypropylene PPC 5660

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For other Regulations, please consult our Product Stewardship Certificate available on this website. We have included in our Polypropylene Product Stewardship Certificate the conformity to a number of regulations whenever it could be certified for all our European polypropylene products.

In case you might need additional technical or regulatory information, please contact your sales representative.



## Description

Polypropylene PPC 5660 is heterophasic copolymer with a Melt Flow Index of 7 g/10min. Polypropylene PPC 5660 is characterized by a medium fluidity offering a combination of ease of processing and good manufactured article properties in applications ranging from household to industrial. Polypropylene PPC 5660 has been developed for the manufacture of garden furniture, battery cases and other articles requiring a combination of good stiffness and impact properties.

## Characteristics

	Method	Unit	Typical Value
<b>Rheological properties</b>			
Melt Flow Index 230°C/2.16 kg	ISO 1133	g/10 min	7
<b>Mechanical properties</b>			
Tensile Strength at Yield	ISO 527-2	MPa	25
Elongation at Yield	ISO 527-2	%	6
Tensile modulus	ISO 527-2	MPa	1300
Flexural modulus	ISO 178	MPa	1200
Izod Impact Strength (notched)	ISO 180	kJ/m <sup>2</sup>	
at 23°C			10
at -20°C			5.5
Charpy Impact Strength (notched)	ISO 179	kJ/m <sup>2</sup>	
at 23°C			13
at -20°C			6
Hardness Rockwell - R-scale	ISO 2039-2		85
<b>Thermal properties</b>			
Melting Point	ISO 3146	°C	165
Vicat Softening Point	ISO 306	°C	
50N-50°C per hour			65
10N-50°C per hour			135
Heat Deflection Temperature	ISO 752	°C	
1.80 MPa - 120°C per hour			50
0.45 MPa - 120°C per hour			92
<b>Other physical properties</b>			
Density	ISO 1183	g/cm <sup>3</sup>	0.905
Bulk Density	ISO 1183	g/cm <sup>3</sup>	0.525

## Safety and Product Stewardship

For safe use and handling, please refer to the Safety Data Sheet. A Product Stewardship certificate giving the conformity to various regulations or statements on absence of certain chemicals is also available on our web site [www.polypropylene.totalpetrochemicals.com](http://www.polypropylene.totalpetrochemicals.com)

An Injection Moulding troubleshooting guide is available upon request.

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Feluy, February 27, 2009

## **POLYPROPYLENE PPC 5660**

### **STATEMENT OF COMPLIANCE FOR FOOD CONTACT APPLICATIONS :**

#### **In the EUROPEAN UNION**

We confirm that the above-mentioned Product fulfils the harmonised requirements on materials used for articles or components of articles intended to come into contact with food as described in the European Directive 2002/72/EC amended by Directives 2004/1/EC, 2004/19/EC, 2005/79/EC, 2007/19/EC, 2008/39/EC and its transposition into national laws as incorporated in the following contact regulations:

in Belgium :

- Arrêté Royal du 03/07/2005 concernant les matériaux et objets destinés à entrer en contact avec les denrées alimentaires (Moniteur Belge du 29/07/2005).
- Arrêté Royal du 05/07/2006 (Moniteur Belge du 07/09/2006) modifiant l'Arrêté Royal du 3/07/2005.

in France :

- Décret Ministériel n° 73-138 du 12/02/73 et n° 2007-766 du 10/05/2007 ainsi que les lettres circulaires de la Répression des Fraudes et contrôle de la qualité (Recueil de textes: brochure n° 1227 "Matériaux au contact des aliments et denrées destinées à l'alimentation humaine" - dernière édition : 15/07/2002);
- Instruction relative à l'emploi d'additifs dans les matières plastiques au contact des denrées alimentaires (Bulletin Officiel de la concurrence, de la consommation et de la répression des fraudes du 11/08/93);
- Arrêté du 19/10/2006 modifiant l'arrêté du 02/01/2003 relatif aux matériaux et objets en matière plastique mis ou destinés à être mis au contact avec les denrées, produits et boissons alimentaires.

in Germany :

- Gesundheitliche Beurteilung von Kunststoffen im Rahmen des Lebensmittel- und Bedarfsgegenständegesetzes (BfR): Empfehlung VII: Polypropylen Stand 01.06.2007 - 210 Mitteilung - B. Gesundh. Bl. 50 (2007) 1470,
- Bedarfsgegenstandsverordnung vom 10. April 1992 ( BGBl.I.S.866) und Änderungen vom 11. April 1993 (BGBl.I.S.775), vom 17. April 1997 ( BGBl.I.S.796), vom 21. Dezember 2000 (BGBl. I. S.1886), vom 7. April 2003 (BGBl.I.S.486) und vom 6. September 2005 (BGBl.I.S.2618).

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in Italy :

- Decreto Ministeriale 21/03/1973 (G.U. n° 104 - 20/4/1973) Disciplina igienica degli imballaggi, recipienti, utensili, destinati a venire in contatto con le sostanze alimentari o con sostanze d'uso personale as amended by Decree of the Ministry of Health N°411 of 1/12/2000 (G.U. N°11-15/01/2001)
- Decreto Ministeriale 26/04/1993, n°220 (G.U. n° 162 - 13/7/1993) Regolamento recante aggiornamento del decreto ministeriale 21/03/1973, concernente la disciplina igienica degli imballaggi, recipienti, utensili destinati a venire in contatto con le sostanze alimentari e con sostanze d'uso personale as updated up to D.M.H n° 82 of 18/04/2007 (G.U. N°151 - 02/07/2007).

in the Netherlands :

- Verpakkingen- en gebruiksartikelenbesluit (Warenwet) - Deel A, Hoofdstuk 1 : Kunststoffen, VGB, 26e suppl., Augustus 2008.

in Spain :

- Orden SCO/ 983/ 2003 de 15 de abril ( B.O.E. n° 99 de 25/04/2003) .
- Resoluciones del Ministerio de Sanidad de 04.11.1982 (B.O.E. n° 282 de 24.11.1982).
- Orden del Ministerio de Sanidad de 03.07.1985 (B.O.E. n° 166 de 12.07.1985).
- Real Decreto 2207/1994 de 16/11/1994 as updated to R.D. 442/2001.
- Real Decreto 118/2003 de 31/01/2003 as updated to R.D. 866/2008.

in the United kingdom :

- The Plastic Materials and Articles in Contact with Food Regulations - 2008
- England: Statutory Instruments 2008/916
- Northern Ireland: Statutory Rules 2008/167
- Scotland: Statutory Instruments 2008/127
- Wales: Statutory Instruments 2008/1237 (W.124)

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## **POLYPROPYLENE PPC 5660**

### **Conditions:**

#### **- Regarding overall migration:**

According to the Directives 82/711/EEC (and its amendments 93/8/EEC and 97/48/EEC), 85/572/EEC and 2002/72/EC, the overall migration limit, for which a maximum value of 10 mg/dm<sup>2</sup> or 60 mg/kg is set (Directive 2002/72/EC, article 2) , has to be controlled on the finished articles intended to come into contact with foodstuffs; consequently it is the responsibility of the end-user of the above-mentioned Product.

#### **Specific Migration Limit(s) and/or other restrictions :**

Restriction for Monomer <sup>a)</sup>: none

Restriction for Additive(s) <sup>b)</sup>:

We shall supply the TOTAL PETROCHEMICALS proprietary information needed to perform the migration measurements upon request.

The end-user must contact us for additional information, and you must inform the end-user accordingly.

It pertains also to end-users to check by appropriate specific migration tests on the final material or article the suitability for contact with different food-types and various end-use conditions. However these are beyond the control of TOTAL PETROCHEMICALS RESEARCH FELUY and are a part of the responsibility of the user of the above-mentioned Product.

#### **European Directive 2004/19/EC and its transposition into national laws:**

We inform you that the above-mentioned Product contains one or more food additive(s) authorized and subject of a use restriction in food under Directive 95/2/EC. We received from the concerned additive(s) suppliers' information demonstrating that applicable restriction in food under Directive 95/2/EC will be met in the finished products. The end-user must contact us for additional information, and you must inform the end-user accordingly.

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## **POLYPROPYLENE PPC 5660**

### **REGULATION 1935/2004/EC**

We hereby confirm that the above-mentioned Product, when used under normal or foreseeable conditions of use, meets the relevant requirements laid down in Regulation 1935/2004/EC.

### **REGULATION 2023/2006/EC (GMP)**

We inform you that the production of the above-mentioned Product is systematically reviewed with regards to good manufacturing practice (GMP) using our ISO 9001 System, and following the Plastics Europe guideline specifically dedicated to GMP. Therefore we can state that the above-mentioned Product meets the relevant requirements laid down in Regulation 2023/2006/EC.

### **in the UNITED STATES OF AMERICA :**

- Code of Federal Regulations Food and Drugs (FDA) Title 21- 2008 - §177.1520: Olefins Polymers;  
For film: Olefins copolymers described in paragraph (a)(3)(i) and (c) 3.1a (except for articles use for packing or holding food during cooking). This product meets the criteria in §176.170(c), with food types I through IX of Table 1, under conditions of use B through H of Table 2.  
For molded or extruded polypropylene: Olefins copolymers described in paragraph (a)(3)(i) and (c) 3.1a(except for articles use for packing or holding food during cooking). This product meets the criteria in §176.170(c), with food types II, III, IV, V, VII-A and IX, under the conditions of use C through G described in Table 2.

### **GENERAL USE CONDITIONS :**

it pertains to end-users of materials intended to come into contact with food, to ensure that the material does not bring about an unacceptable change in the composition of the food, or bring about a deterioration in the organoleptic characteristics which render it unfit.

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## **POLYPROPYLENE PPC 5660**

### **STATEMENT ON TOYS - EUROPEAN STANDARD EN 71- 3.1994 and EN 71- 9.2005 :**

We hereby confirm that the above-mentioned Product meets the requirements of European Standard EN 71-3 1994 its amendment EN 71- 3/ A1 2000 corrigendum AC: 2002 entitled "Safety of Toys - Part 3 : Migration of certain elements" and EN 71-9, September 2005 "Organic chemical compounds- requirements".

The above-mentioned Product meets this standard because every time analyses were performed on this product, results were below the prescribed limits.

### **STATEMENT ON NO COMPLIANCE WITH EUROPEAN PHARMACOPOEIA :**

We **DO NOT** certify that the above-mentioned product would comply with the European pharmacopoeia.

### **STATEMENT ON NO COMPLIANCE WITH UNITED STATES PHARMACOPOEIA :**

The above-mentioned product is **NOT** in compliance with the US pharmacopoeia because we **DID NOT** perform the required tests.

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Feluy, February 27, 2009

## **POLYPROPYLENE PPC 5660**

### **STATEMENT ON TRANSMISSIBLE BOVINE SPONGIFORM ENCEPHALOPATHY (BSE) :**

Our suppliers provided us with documents addressing potential BSE/TSE concerns for additives which might be used in the above-mentioned Product and may themselves be derived from tallow/lard, or contain components derived from tallow/lard (tallow derivatives). Based on our supplier documentation and/or our own evaluation, we can confirm the following:

- 1) While Regulation (EC) No 999/2001 laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (TSE) does not apply to components of packaging materials, we can confirm that none of the components potentially present in the above-mentioned Product qualify as Specified Risk Materials (SRMs) under said Regulation.
- 2) While Regulation (EC) No 1774/2002 laying down health rules concerning animal by-products not intended for human consumption does not apply to tallow derivative components themselves, which do not qualify as animal by-products subject to the Regulation, we can confirm that any animal by-product used to manufacture the tallow from which tallow derivative components in the above-mentioned Product are derived are exclusively Category 3 materials processed in compliance with said Regulation.
- 3) The tallow derivatives potentially present in the above-mentioned Product comply with the requirements of Section 6-4 ("Tallow derivatives") of Chapter 5.2.8 of the European Pharmacopoeia ("Minimising the Risk of Transmitting Animal Spongiform Encephalopathy Agents via Human and Veterinary Medicinal Products") and the guidance document bearing the same name issued by the European Medicines Agency (EMEA/410/01 Rev2 – October 2003) and given the force of law by Directives 2001/82/EC and 2001/83/EC. We note that European Pharmacopoeia Chapter 5.2.8 is identical to the EMEA guidance document.

### **STATEMENT ON GENETICALLY MODIFIED ORGANISMS (GMO).**

We hereby confirm that we did receive an indication from our suppliers of additives <sup>b)</sup> used in the above-mentioned Product mentioning the absence of any Genetically Modified Organisms (GMO).

### **STATEMENT ON INVENTORIES:**

We declare that the monomers and, if present, the additives <sup>b)</sup> of the above-mentioned Product are listed or exempted from listing on:  
AICS, DSL, ECL, EINECS AND/OR ELINCS, ENCS, IECSC, PICCS, TSA and TSCA.

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**NOTE :**

- a) Monomer as defined in the EC Directive 2002/72/EC up to 2008/39/EC.
- b) Additive as defined in the EC Directive 2002/72/EC up to 2008/39/EC.

**DISCLAIMER :**

Our certificate does not cover:

- any modification of the the above-mentioned Product by any addition of any other product or Ingredient to it;
- any prejudicial modification of the above-mentioned Product resulting from a processing of it;
- an inadequate use and/or storage of the above-mentioned Product and/or of the finished articles.

The present certificate is valid until end 2009. Upon the expiration of this certificate, we can issue a new one at your request. In case of change during this period a new certificate will be issued automatically; kindly forward it to any recipient of the present certificate.

TOTAL PETROCHEMICALS RESEARCH FELUY

C. RAIMOND  
Regulatory Affairs

F. WYLIN  
Regulatory Affairs, Manager

Issued by an electronic system

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