

DECLARATION 251204

Re: EU Directive 94/62 EC

I confirm that we have documentation from all of our material and additive suppliers that heavy metals are not deliberately included within their products. In order to demonstrate our compliance with the requirement in Regulation 16 to demonstrate due diligence, we have selected typical examples of our products and sent samples to an independent laboratory for testing.

The samples were selected to obtain the widest possible range of base polymers, additives, colour masterbatch and processes within just a few samples, due to the relatively high cost of each test. For each example selected, the total amount of heavy metals included was less than 4 parts per million and we are totally confident that this applies equally to the rest of our range of products.

Re: EU Directive 2002/72/EC (UK S.I. 2000/3162) and amendments

I confirm that we have documentation from all of our material and additive suppliers confirming that the materials as supplied meet the requirements of the above legislation *where this is declared on Worldwide Dispensers documentation and on specifications against the specific Worldwide Dispensers part number.* In order to demonstrate our compliance with the requirement to demonstrate due diligence, we have selected typical examples of our products and sent samples to an independent laboratory for testing. All samples passed.

Re: FDA Compliance

Worldwide Dispensers hold declarations from the material suppliers that no raw materials or additives are used other than those permitted in the USA according to the Code of Federal Regulations, issued by the Food and Drug Administration (FDA) 21 CFR:

1. Main Polymers: FDA Regulation 21 CFR 177.1520(c)3.1a olefin polymers.
2. Colourants: All ingredients meet current requirements covering polyolefins for use in food contact applications. FDA Regulation 21 CFR 177.1520, 178.2010, 178.3297.

I confirm that:

All materials used in the manufacture of WD Part number 251204 (Aeroflow 1.6 polythene natural/red) comply fully with the above legislation. Future deliveries of these products will also comply with this legislation.

Derrick Hodgson
QUALITY MANAGER

10 March 2003

GUSTAF v. SIVERS AB
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Stamylex 2258

Linear low density polyethylene

DATA SHEET

Description and Attributes

Stamylex 2258 is a linear low density polyethylene produced in a solution polymerisation process using a Ziegler – Natta catalyst.

Characterised by good processing properties and toughness, Stamylex 2258 is used primarily to manufacture articles with extremely long flow paths and stringent warp requirements.

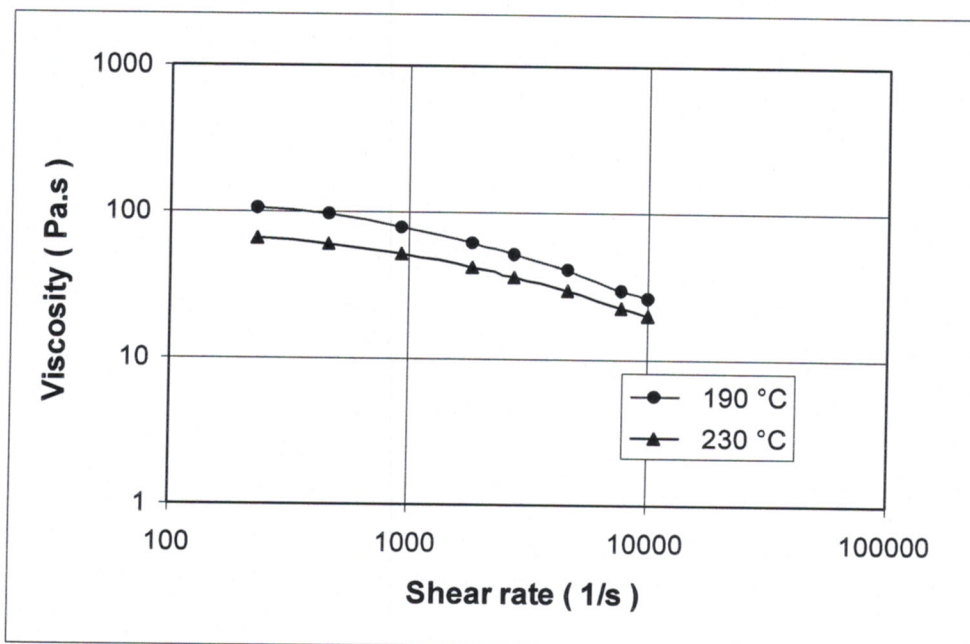
Applications

A high resistance to environmental stress cracking and its dimensional stability render Stamylex 2258 particularly suited for (domestic) applications, which require good resistance to the aggressive cleaning environment and high temperatures typically encountered, for example, in dish washing machines.

Polymer properties	<i>Units</i>	<i>Typical values</i>	<i>Method</i>
Melt Flow Rate (2.16 kg/190°C)	dg/min	24	ISO 1133
Density (23°C) [1,2]	kg/m ³	926	ISO 1183 (A)
Mechanical properties [2,3]	<i>Units</i>	<i>Typical values</i>	<i>Method</i>
Tensile test [5]			ISO 527/2
Stress at break [7]	MPa	8.3	
Strain at break [7]	%	65	
Tensile modulus [6]	MPa	300	
Notched Izod [9]			ISO 180/A
at + 23 °C	kJ/m ³	47	
Shore hardness D [11]		49	ISO 868
Thermal properties			
Vicat softening temperature at 10 N (VST/A)	°C	94	ISO 306
DSC melting point [13]	°C	118	DIN 53765
Enthalpy change	J/g	125	DIN 53765

- [1] Specimen dimensions : 42 x 42 x 1.6 mm
 [2] Compression moulding conditions of test specimen (per ISO 293) : moulding temperature 160 °C, cooling rate 40 °C/min
 [3] Conditioning of test specimen : temperature 23 °C, RH 50 %, 16 hrs
 [5] Test specimen as per ISO 527/2 type 1 BA, thickness 2 mm
 [6] Speed of testing : 1 mm/min
 [7] Speed of testing : 500 mm/min
 [9] Specimen dimensions : 80 x 10 x 4 mm, notch 45 °, r 0.01"
 [11] After 15 seconds
 [13] Top melt temperature at 10 °C/min

Stamylex 2258



Food Law Compliance and Product Handling

Stamylex 2258 complies with FDA 21 CFR 177.1520 (olefin polymers).

More detailed and specific information on food law compliance and material safety aspects of Stamylex grades will be provided upon request.

Packaging

Stamylex 2258 is supplied as free flowing pellets with standard package type 25 kg bags on shrink wrapped pallets with a total weight of 1'375 kg.

Further information

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Polypropylene RF365MO

Description

RF365MO

Applications

Closures
Thin wall containers

Excellent transparency

Special features

Improved gloss and excellent transparency
Shows excellent antistatic performance

Good impact strength
High stiffness

Physical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
Density	905 kg/m ³	ISO 1183
Melt Flow Rate (230 °C/2, 16 kg)	20 g/10min	ISO 1133
Tensile Modulus (1 mm/min)	1.150 MPa	ISO 527-2
Tensile Strain at Yield (50 mm/min)	11 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	29 MPa	ISO 527-2
Heat Deflection Temperature (0,45 N/mm ²) ¹	80 °C	ISO 75-2
Charpy Impact Strength, notched (23 °C)	5,5 kJ/m ²	ISO 179/1eA
Hardness, Rockwell (R-scale)	82	ISO 2039-2

¹ Measured on injection moulded specimens acc. to ISO 1873-2

Processing Techniques

This product is easy to process with standard injection moulding machines.

Following moulding parameters should be used as guidelines:

Melt temperature	210 - 260 °C
Holding pressure	200 - 500 bar
Mould temperature	30 - 40 °C
Injection speed	High

Minimum to avoid sink marks.

Shrinkage 1 - 2 %, depending on wall thickness and moulding parameters



Polypropylene RF365MO

Storage

RF365MO should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

Safety

The product is not classified as a dangerous preparation.

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Please see our Safety Data Sheet for details on various aspects of safety, recovery and disposal of the product, for more information contact your Borealis representative.

Related Documents

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

Safety Data Sheet
Recovery and disposal of polyolefins
Information on emissions from processing and fires
Statement on compliance to food contact regulations



Polypropylene
RF365MO

Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.