

## HDPE BLOW MOULDING

### HD 5403 EA

HD 5403 EA\* is a medium molecular weight copolymer grade with a broad molecular weight distribution, which offers excellent processing properties for use in a range of blow moulded applications.

HD 5403 EA has the following characteristics:

- Excellent processing.
- Good rigidity.
- High environmental stress-cracking resistance.
- Medium impact strength.

### Applications

- Blow moulded containers up to 30 liters for packaging chemicals.
- Household products.

### Typical Properties

Property/Grade	Test Method	Unit of measurement	Value
Melt flow rate (2.16 Kg)	ISO 1133	g/10 min	0.35
Density	ISO 1872/1	Kg/m <sup>3</sup>	955
Tensile strength at yield	BP 13B/1	MPa	26
Elongation at break	BP 13B/1	%	950
Flexural Modulus	ISO 178-1975	MPa	1070
Impact Resistance, F 50	BP 13B/11	m	2.4
•BSCR, 50° C	BP 13C/25	hours	15

• BSCR: Bottle stress cracking resistance.

\* EA: Standard unmodified except for antioxidant.







## Food Contact Plastics

# Certificate of Conformity with the Requirements of EU Regulation 10/2011, as amended.

**Certificate no: 2012/4669**

**Product name:** HDPE Resin; 'HD 5502 GA / HD 5403 EA'  
**Manufacturer:** Sidi Kerir Petrochemicals Co. "SIDPEC"  
**Address:** km 36 Alex-Cairo Desert Road, Alnahda, Alameria, Alexandria, EGYPT  
**Date of Issue:** 7 February 2012  
**Pira Ref no:** 07A12J3146/11A12J4763

Samples manufactured from the above resin have been tested for overall migration with the simulants and test conditions listed below.

Test Conditions			
Food Simulants	Duration	Temp/°C	Test
Simulant A, B and D2	10 days	40°C	TI

TI = exposure to food simulant by total immersion.

The overall migration results obtained were found to be below the overall migration limits defined in EU Regulation 10/2011.

Additionally, Pira have carried out an audit of the formulation of the above product. All monomers and additives contained in the formulation are approved for use in food contact plastics and are listed in Annex I of EU Regulation 10/2011. The following substance(s) are subject to restrictions under this legislation;

- Zinc salt of stearic acid, PM Ref 89040, CAS 57-11-4, FCM No 106, SML = 25 mg/kg (as Zn)
- Reaction product of di-tert-butylphosphonite with biphenyl, obtained by condensation of 2,4-di-tert-butylphenol with Friedel Craft reaction product of phosphorous trichloride and biphenyl, PM Ref 83595, CAS 119345-01-6, FCM No 760, SML = 18 mg/kg
- Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate, PM Ref 68320, CAS 2082-79-3, FCM No 433, SML = 6 mg/kg.

Experimental studies and/or migration modelling using an accepted EU model (Migratest Lite) with exposure condition of 10 days at 50°C, a material thickness of 500 µm and the conventional EU ratio of 6 dm<sup>2</sup> of packaging per kg of food have shown that the above restriction/s will not be exceeded under these conditions.

The formulation of the above resin contains no multiple function additive/s; (NB Multiple function additives are defined as those which are also approved for direct addition into foods and which would therefore be subject to separate food regulations).

The above resin can therefore be used to manufacture products which meet the requirements of EU Regulation 10/2011, as currently amended, for use with all classes of foodstuff for;

- (a) frozen/refrigerated conditions and any period (up to 6 months) at room temperature or below, and/or
- (b) periods up to 2 hours at temperatures up to 70°C, and/or
- (c) periods up to 15 minutes at temperatures up to 100°C.

The product therefore also meets the safety requirements laid out in Article III of EC Regulation 1935(2004) under the above conditions of use.

NB Users are reminded that EU Regulation 10/2011 relates to finished articles/materials manufactured from plastics. Users of the above products are responsible for ensuring that their finished products comply with the overall migration limit and any specific migration limit/s mentioned above, by conducting appropriate tests on their finished products.

**Certified by: Dr Alistair Irvine**  
*Principal Consultant, Food Packaging Safety*

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## Certificate of Conformity with the Taint and odour Requirements of EC Regulation 1935 (2004)

Certificate no: 2006/3273

**Product Name:** HD 5403 EA  
**Date of Issue:** 3 November 2006  
**Pira Reference No:** 06A12J1788  
**Manufacturer:** Sidi Kerir Petrochemicals (SIDIPEC) Egypt  
El Amerya  
Nahda Territory  
Alexandria  
Egypt

A sample of the above product has been tested for sensory analysis (taint and odour) using methods BS EN 1230-1 & 2; 2001, with the test conditions listed below.

Taint test Test Food	Test Conditions	
	Duration	Temp/°C
Milk chocolate; direct contact	2 days	23°C

Odour test Test Conditions	
Duration	Temp/°C
1 days	23°C

The taint and odour results obtained showed that the product did not transfer substances to the test food causing it to become tainted.

*The above product was therefore found to be in compliance with the taint and odour requirements of EC Regulation 1935 (2004).*

**Certified by: Allison Leach**  
**Senior Analytical Chemist**  
**Analytical Services**