



TECHNICAL DATA SHEET

PCR HDPE

SMR2112W (White)

100% Post-Consumer Recycled high density polyethylene.

DESCRIPTION

PCR HDPE SMR2112W is made by post-consumer HDPE caps from drinking water bottles. It can be used for injection processing goods. These r-HDPE pellets are manufactured through high quality recycling process complying with GRS (global recycled standard), including washing, melt filtration and pelletization, etc.

APPLICATIONS

Food Containers	Packaging components
Lids	Water cups
Caps	Housewares containers

SPECIAL FEATURES

Lower impurity content control	Stable MFR suitable for injection molding
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COMPLIANCE

FDA compliant	
REACH (224 SVHC)	RoHS Directive (EU) 2011/65

PHYSICAL PROPERTIES

Property	Typical Value	Test Method
Density	0.94 g/m ³	ISO 1183
Melt Flow Rate (190°C/2.16kg)	4 g/10min	ISO 1133
Tensile Stress (50mm/min)	20 MPa	ISO 527-2
Tensile Modulus (50mm/min)	700 MPa	ISO 527-2
Elongation by break	>120%	ISO 527-2
Flexural Modulus	745 MPa	ISO 178
Flexural Strength	20 MPa	ISO 178
Ash Content	<1 %	ISO 3451-1
Melt Point	140 °C	ISO 11357
Molding Shrinkage	1.55 %	Internal
HDT(0.45Mpa)	65 °C	
Charpy Impact Strength, notched (23°C)	5.6 KJ/m ²	ISO 180
Charpy Impact Strength, unnotched (23°C)	NB	ISO 180
Odor	<4 Grade	80°C-2h
	L	≥65
Color	a	0.25-1
	b	0-7
Heavy Metals (Rohs)	Cd	N.D.
	Hg	N.D.
	Pb	N.D.
	Cr	N.D.

* Data shown above are representative values for reference purposes only, and not to be construed as specifications.

PROCESSING CONDITIONS

PCR HDPE SMR2112W is easy to process with standard injection moulding machines.

Following parameters should be used as guidelines:

Melt temperature: **160 - 200 °C**

Holding pressure: **200 - 500 bar**

Mould pressure: **60-100 MPa**

Mould temperature: **30 - 50 °C**

Molding time: **30-60 s**

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

STORAGE

PCR HDPE SMR2112W 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.

More information on storage can be found in Material Safety Data Sheet (MSDS) for this product.

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.

DISCLAIMER

This information contained herein is based on the data available to us and is believed to be correct. However, SMART makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. Each user of the products shall convince himself through all available sources (including finished product testing in its appropriate environment) of the suitability of the products supplied for its particular purpose.

ADDRESS

Shanghai SMART New Materials Co., Ltd
19B, No.985 Dongfang Road, Pudong District, Shanghai, China
Tel: 021-63149892, Post Code: 200021