TECHNICAL DATA SHEET

Repsol Alcudia® 5803

REPSOL ALCUDIA 5803 is a bimodal, medium molecular weight, high-density polyethylene. It is specially designed for extrusion blow molding of liquid detergents and chemicals containers.

This grade incorporates stabilizers tailored to the intended application, ensuring enhanced thermal stability during processing and end use.

Thanks to its optimized molecular weight distribution and density, REPSOL ALCUDIA 5803 delivers excellent mechanical performance, combining high stiffness with superior resistance to environmental stress cracking.

Applications:

- Packaging detergents, cleaners, shampoos and cosmetics at a high ESCR demand.

Recommended melt temperature range from 180 to 200°C. Processing conditions should be optimized for each production line.

Properties:

Properties	Value*	Unit	Test Method
General			
Melt flow rate (190°C, 2.16 kg)	0.25	g/10 min	ISO 1133
Melt flow rate (190°C, 5 kg)	1.1	g/10 min	ISO 1133
Melt flow rate (190°C, 21.6 kg)	25	g/10 min	ISO 1133
Density at 23°C	958	kg/m^3	ISO 1183
Mechanical			
Tensile strength at break	30	MPa	ISO 527-2
Elongation at break	800	%	ISO 527-2
Tensile strength at Yield	30	MPa	ISO 527-2
Flexural modulus of elasticity	1400	MPa	ISO 178
Other			
Vicat Softening Temperature (10 N)	128	°C	ISO 306
Shore Hardness D	66	°	ISO 868
Environmental Stress Cracking Resistance (F_{50}) (Igepal 10%, 50°C)	200	h	ASTM D-1693
Environmental Stress Cracking Resistance (F_{50}) (Igelpal 100%, 50°C)	>600	h	ASTM D-1693

* Typical values - Not to be considered as specification

This information is offered in good faith and meant only as a guide. The transformer or user will be, in each case, responsible for the processing conditions and the final use of the product. Freedom under patents, copyright and registered designs cannot be assumed.

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Storage:

REPSOL ALCUDIA 5803 should be stored in a dry atmosphere, on a paved, drained and not flooded area, at temperatures under 50ºC and protected from UV radiation. Storage under inappropriate conditions could initiate degradation processes or undesired migration of additives included in its formulation which may have a negative influence on the processability and properties of the transformed product.

Disclaimer:

This grade complies with the European regulations for materials for use in food contact. This grade is not intended to be used in medical, pharmaceutical, or healthcare applications, therefore Repsol does not authorize its use in them.

Repsol does not grant express or implicit guarantees that extend beyond the description contained herein. Nothing herein shall constitute any guarantee of merchantability or fitness for a particular purpose. Before using a product sold by Repsol, users must make their own independent determination that the product is safe, legal, and technically suitable for its intended use. Repsol does not assume any responsibility for the use of its materials together with other materials.

Related documents:

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

- Safety data sheet
- Statement on compliance with food contact regulations

Recommended consumption period: 12 months from the date of delivery to the customer.

May 2026

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