

Laser+® W (AF405)

Product Data Sheet

Application/Uses

- Large water containers
- Water bottles

Product Description

DAK Americas Laser+® W AF405 is a condensation polymer produced by a continuous melt-phase polymerization process followed by a solid-state polymerization process. This product is specifically designed for large water container applications in Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Paraguay, Peru, Uruguay and Venezuela.

Sales Specifications

SPECIFICATION N°: AF405-2
EFFECTIVE DATE: March 15, 2011

This specification describes a grade of clear copolyester in the form of pellets which must meet all of the requirements listed below when tested as directed by the referenced methods.

Property	Value	Test Method
Intrinsic Viscosity	0.82 +/- 0.02	VGAS-A-AN-G-V-1 (or equivalent)
Color: CIE L*	78 minimum	VGAS-A-AN-G-RS-0001
Fines	0.05 wt % maximum	VGAS-A-AN-G-GA-1 (or equivalent)
Acetaldehyde	2 ppm maximum, residual	VGAS-A-AN-G-GC-2

Product shipments are not tested for acetaldehyde. Samples that are representative of product are tested in a monitor program to ensure that the process capability for acetaldehyde in the polymer is less than the specification limit.

For reasons of safety and accuracy, the person performing methods described herein must be thoroughly trained and under the supervision of a professional person who is knowledgeable in the relevant science. Equipment and materials described should be used in accordance with safety precautions recommended by their manufacturers.

Typical Properties

Property ^a	Test ^b Method	Typical Value, Units ^c
Pellet Properties		
Crystalline Density	D 1505	1.35 g/cm ³
Bulk Density		
Poured	D 1895	805 kg/m ³ (50 lb/ft ³)
Vibrated	D 1895	880 kg/m ³ (55 lb/ft ³)
Melt Density @ 285°C (545°F)	D 1238 (Note A-Table 2)	1.29 g/cm ³
Crystalline Peak Melting Point (T _m) ^d	D 3418	242°C (467°F)
Heat of Fusion ^e	E 793	59 kJ/kg (14 cal/g)
Specific Heat ^e		
@ 23°C (73°F)	E 1269	1.0 kJ/kg·K (0.24 Btu/lb·°F)
@ 80°C (176°F)	E 1269	1.3 kJ/kg·K (0.31 Btu/lb·°F)
@ 100°C (212°F)	E 1269	1.4 kJ/kg·K (0.33 Btu/lb·°F)
@ 200°C (392°F)	E 1269	1.8 kJ/kg·K (0.43 Btu/lb·°F)
@ 280°C (536°F)	E 1269	2.1 kJ/kg·K (0.50 Btu/lb·°F)
Pellet Size		2 x 2 x 3 mm (.1x.1x.1 in.)
Pellet Shape		Rectangular

^a Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^b Unless noted otherwise, the test method is ASTM.

^c Units are in SI or US customary units.

^d Determined by DSC on the second heating cycle.

^e Determined by DSC on the first heating cycle.

Specific heat in cal/g°C is numerically equivalent to the value in Btu/lb°F.

Comments

Properties reported here are tentative data based on testing of one lot of this material, and therefore may or may not be representative of average lots. DAK Americas makes no representation that the material in any particular shipment will conform exactly to the values given.

Caution: Do not use in medical applications involving permanent or temporary implantation in the human body. For other applications, see "DAK Medical Caution Statement" or the Material Safety Data Sheet for this product.

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