INEOS ABS

LUSTRAN® ABS 786

ABS

Extrusion Grade for DWV Pipe

Description

Lustran ABS 786 resin is a black, virgin extrusion grade of ABS (acrylonitrile butadiene styrene). It is designed for extruded drain, waste, and vent (DWV) pipe. Lustran 786 (901046 black) resin meets or exceeds ASTM D 3965 4-2-2-2-2 cell class requirements for ASTM F 628 and D 2661. It is also listed under NSF Standard 14. As with any product, use of Lustran ABS 786 resin in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

Drying

Drying prior to processing is recommended in a desiccant dehumidifying hopper dryer. An inlet air dew point of -20°F (-29°C) or below is recommended to achieve a moisture content of 0.05% maximum. Typical drying conditions are 2 hours at 180°-200°F (82°-93°C).

Processing

Screw Design. Good extrusion characteristics are obtained on a variety of screw types, such as conventional single- and two-stage metering and single- and two-stage high-shear screws, which utilize mixing rings or multiple flight configurations. Typically, best performance has been observed with those screws having compression ratios between 2.4 and 2.8:1 and length-to-diameter ratios of 24 to 36:1.

Dies. Interiors should be streamlined with smooth, chrome-plated surfaces to minimize stock hang-up and degradation. Thin, tear-drop spider vanes are highly recommended to maximize weld-line strength. Welds are further strengthened by compressing the melt in the final die lip approach. For Schedule 40 pipe that is 4 inches and under in diameter, a land length-to-pin clearance ratio of 25:1 is preferred. Dies for larger-diameter and/or heavier-wall pipe may require higher ratios or pin chokes.

Melt Temperature. Optimum pipe properties are obtained when melt temperatures are between 430° and 450°F (221° and 232°C). Temperatures above 465°F (241°C) are not recommended since these can lead to degradation on the inner pipe walls.

Additional information on processing may be obtained by contacting an INEOS ABS technical service representative.

Regrind Information

Generally ABS regrind can be used up to 40% with virgin ABS as long as the regrind is clean and uncontaminated with other materials and properly dried. However, DWV pipe and fittings are regulated by NSF under Standard 14. This standard restricts the use of regrind. Each processor must submit samples and obtain specific approval from NSF to utilize any regrind. NSF, after review and testing, has allowed the use of in-plant line scrap, which would be the processor's regrind, up to about 10%. For more information, consult NSF Standard 14 or call NSF. For DWV applications that are not covered by NSF and Standard 14, consult the appropriate building code or applicable regulatory agency for guidelines or call your INEOS ABS representative.

Health and Safety Information

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling the INEOS ABS products mentioned in this publication. For materials mentioned which are not INEOS ABS products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be followed. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, *e.g., material safety data sheets and product labels*. Consult your INEOS ABS representative or contact the Product Safety and Regulatory Affairs Department at INEOS ABS.

Typical Physical Properties* for Black (901046 Color) Resin	ASTM Test Method (Other)	Units U.S. Conventional	Units SI Metric	Lustran® 786 ABS Resin** U.S. Conventional	Lustran® 786 ABS Resin** SI Metric
General					
Specific Gravity	D 792			1.03	
Density	D 792	lb/in³	g/cm³	0.037	1.03
Specific Volume	D 792	in³/lb	cm³/g	26.9	0.97
Mechanical					
Tensile Stress at Yield	D 638	lb/in²	MPa	5,000	34
Tensile Modulus	D 638	lb/in²	GPa	280,000	1.9
Impact Strength, Notched Izod:	D 256				
0.125-in (3.2-mm) Thickness					
73°F (23°C)		ft·lb/in	J/m	11.0	587
-22°F (-30°C)		ft·lb/in	J/m	7.5	400
Thermal					
Deflection Temperature, Annealed:	D 648				
0.250-in (6.4-mm) Thickness					
264-psi (1.82-MPa) Load		°F	°C	212	100

** These items are provided as general information only. They are approximate values and are not part of the product specifications.*

*** Property values obtained on injection molded specimens unless otherwise noted.*

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