Dow Packaging & Specialty Plastics

Product Data Sheet

DOW™ LDPE 6611

Purge Resin

General Information

Product Description	DOW™ LDPE 6611 is a high viscosity low density polyethylene resin that contains various additives to assist in purging and cleaning the extruder. This polymer is formulated with agents to help it wet and scour metal surfaces within the extrusion system. It also contains a blowing agent which helps to disrupt normal flow patterns and enhance scouring action. The resin normally will foam, snap, and crackle as it leaves the die. Odors that are associated with ammonia and fish are detectable from the extrudate and feed hopper. When extruded, the resin has a grayish brown color and a very high viscosity at the die exit.

Status

Material Status	Commercial: Active
Other Restrictions	Precautions: *** Adequate ventilation is required for use. Fumes from extrusion can be irritating to the eyes, nose, and throat. Fumes from high temperature extrusion of polyolefin resins contain various products of decomposition that may be toxic. *** Exploding bubbles can spit hot polymer as the melt exits the die. Proper protective apparel, including eye protection, should be worn. DOW™ LDPE 6611 should not be extruded or exposed to temperatures above 310°C (590°F). DOW™ LDPE 6611 does not comply with FDA regulations, so complete purging from the extrusion system is required after use. DOW™ LDPE 6611 contains silicon dioxide to assist in scouring hard deposits from metal surfaces. Excessive use of this purge compound can cause premature equipment wear, particularly in some extrusion systems that are soft nickel plated.

Typical Characteristics

Applications	DOW™ LDPE 6611 is not required for normal transitions into and out of SURLYN™ ionomer resins, NUCREL™ acid copolymer resins, and other common polyolefins. The "Disco Purge / Transition Procedure" is recommended for use during these normal transitions, and special purging compounds such as DOW™ LDPE 6611 are not part of this procedure. There are instances, however, when it is practical to use a special purging compound like DOW™ LDPE 6611. For a copy of the "Disco Purge / Transition Procedure", please contact your Dow Packaging & Industrial Polymer representative. Examples for use include: - Cleaning particularly dirty extruders. - Removing die lines caused by oxidized polymer deposits. - Purging extruders that have chronic purging problems (gels) following runs of SURLYN™ resins, NUCREL™ resins, ELVAX™ ethylene vinyl acetate resins, or other specialty resins. Consulting your technical representative is also highly recommended for these cases. - Purging prior to extrusion jobs that are particularly sensitive to gels. - Facilitating purging for shutdowns when normal Disco Purging has not proven effective. A shutdown is any period of time when the extruder will be completely turned off, such as a weekend or maintenance outage. It is very important that specialty copolymers such as SURLYN™ and NUCREL™ be completely purged before such a shutdown, as the cool-down, heat-up, and soak periods allow plenty of time to cause significant gel problems. - Facilitating rapid removal of pigments from the extruder. - DOW™ LDPE 6611 has also been used to facilitate pulling and cleaning large diameter extrusion screws. However, acrylic purge material is normally used for this purpose. - The high viscosity of DOW™ LDPE 6611 lends itself to easy cleaning of hardware during disassembly, because it peels rather than smearing along the metal surfaces. Although most frequently used on flat die extrusion equipment, DOW™ LDPE 6611

can also be used for round die converting equipment as well. It can be difficult to purge DOW™ LDPE 6611 out of standard spiral-fed blown film dies, unless a very low melt index polyethylene is available for this purpose (0.5 MI LDPE or 1.0 MI LLDPE).

Typical Properties

Physical	Nominal Values	Test Method(s)	
*Density ( )	0.97 g/cm³	ASTM D792	ISO 1183
*Melt Flow Index (190°C/2.16kg)	approx. 0.4 g/10 min	ASTM D1238	ISO 1133

Thermal	Nominal Values	Test Method(s)	
*Melting Point (DSC)	109 °C (228.2 °F)	ASTM D3418	ISO 3146
Freezing Point (DSC)	95 °C (203 °F)	ASTM D3418	ISO 3146

Processing Information

*Maximum Processing Temperature	285 °C (545 °F)
General Processing Information	*** DOW™ LDPE 6611 has a very specific procedure for proper useage. Please consult with your local Dow technical representative to request a copy of the procedure. *** This procedure specifies how to properly utilize the resin, and in what proper quanities for a given size extrusion system. Improper useage of the material will lessen its effectiveness, and possibly make it more challenging to remove from the system using a polyethylene resin with the appropriate melt flow rate. To activate the blowing agent, the resin must be extruded above about 221°C (430°F). Purging efficiency may be somewhat reduced if the resin does not foam. The maximum recommended temperature for use in purging extrusion equipment is 285C (545F). This is due to the volatility of the blowing agent, and the increased spitting of polymer from the die exit as a hazard. The highest temperature to use in any environment where operators are not exposed to the polymer exiting the die would be a maximum of 310C (590F). However please note that experience has found that the purge compound is effective at 285C (545F), and higher temperatures are not necessary for processing. Thus for operations safety, 285C (545F) as a maximum use temperature is recommended.
FDA Status Information	DOW™ LDPE 6611 Resin does not comply with FDA regulations permitting contact with food. This product is designed to be used to clean extruders and not for manufacture of food contact materials. After the Dow 6611 has been used as a purge compound, we recommend that its residues be purged from the extruder with a food grade polymer.
Regulatory Information	For information on regulatory compliance outside of the U.S.A., consult your local Dow representative.
Safety & Handling	For information on appropriate Handling & Storage of this polymeric resin, please refer to the material Safety Data Sheet. A Product Safety Bulletin, material Safety Data Sheet, and/or more detailed information on extrusion processing and/or compounding of this polymeric resin for specific applications are available from your Dow representative.

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For further information contact your Dow sales or technical representative to request a Medical Application Review Request Form. Additional details of Dow's Medical Applications Policy are available at:
https://www.dow.com/en-us/support/product-safety.html

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http://www.dow.com/products_services

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Additional Information

To contact Dow via Toll-Free or Local Toll phone numbers in specific countries, please see the following webpage:
https://www.dow.com/en-us/support/contact-representative.html

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