

**Technical Data Sheet** 

# XL-PEARL<sup>™</sup> 31

## XL-PEARL© 31 Description

XL-PEarl 31 blend is for the manufacture of dry silane masterbatches based on porous polymer carriers. XL-PEarl 31 blend is a crosslinking system developed for the manufacture of crosslinked LLDPE low- and medium-voltage cables using the XL-PEarl blend one-step process.

It is only available for licensees of the XL-PEarl blend technology.

## Key Features and Benefits

• XL-PEarl 31 blend can be used with a wide range of stabilized LLDPE, MDPE and HDPE poly ethylene grades for optimum costeffectiveness. This also applies for nonstabilized resin used in association with an antioxidant masterbatch

• A high onset temperature of the silane crosslinking agent improves process stability and minimizes pregrafted/crosslinked particles in the insulation layer

#### Typical Physical Properties

Appearance	Clear liquid
Color	Light yellow
Viscosity, mPa s (cP), @ 23°C	2.2
Specific Gravity, g/cm <sup>3</sup> , @ 23°C	0.962
Flash Point, Tag Closed Cup, ASTM D56-79, °C	23

#### **Potential Applications**

Manufacturing of XL-PEarl 31 blend masterbatches for the crosslinking of low- and medium-voltage power cables based on stabilized polyethylene resins.

#### **Patent Status**

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### Product Safety, Handling and Storage

The Self-Accelerating Decomposition Temperature (SADT) of XL-PEarl 31 blend in 217L drums is predicted to be above 65°C (149°F). However, it is recommended that drums of XL-PEarl 31 blend not be stored or shipped at temperatures above 30°C (86°F), since some degradation of product may occur.

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#### **Processing Recommendations**

Recommended resins

XL-PEarl 31 blend can be used either with nonstabilized polyethylene resins and an antioxidant masterbatch or with stabilized cable grade resins.Recommended types are:

- Exxon Escorene LLN 1004YB, in conjunction with a stabilizer masterbatch
- BP 3000 series
- Aspel 1200 1600 series

Other polyethylene resins should have the following properties:

LDPE resins:	Melt index (190°C/2.16 kg):	0.2 to 0.5 g/10 min.
	Density:	0.915 to 0.935 g/cm <sup>3</sup>
LLDPE resins:	Melt index (190°C/2.16 kg):	0.5 to 6 g/10 min.
	Density:	0.900 to 0.935 g/cm <sup>3</sup>

#### Limitations

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