

Data sheet

Granule Type: APXLP12BC/APCAT12N Silane Cross-linkable Polyethylene Compound

Description

APXLP12BC is a XLPE pre-grafted polyethylene which can be processed in combination with its catalyst master batch (APCAT12N) in conventional extruders. End product crosslinking occurs when the material is exposed to moisture. It contains 2.5% well dispersed carbon black in order to ensure excellent weathering resistant.

Application

APXLP12BC is suitable for insulation of Aerial Bundled Cables.

Specification

The catalyst masterbatch APCAT12N in combination with the base material APXLP12BC meets the applicable requirements given below when processed using extrusion practice and testing procedure:

- NF C 33-209
- BS 7870-5
- IEC 60502-1

Physical Properties

| Properties | Standard and Test Method | Unit | Typical Value |
|--|----------------------------|------------------------|-------------------|
| Melt Flow Index (190°C/5kg) | ASTM D1238 | gr/10min | 4±0.5 |
| Density | ASTM D 792 / IEC 60811-1-3 | gr/cm ³ | 0.930±0.005 |
| Properties before ageing Tensile strength Elongation at break | IEC 60811-1-1 | N/mm ² % | min 18 min 400 |
| Properties after ageing "10 days at 150°C" Variation of Tensile Variation of Elongation | IEC 60811-1-2 | % % | max 25 max 25 |
| Hot Set Test (200°C,0.3MPa) Elongation under load Permanent elongation after cooling | IEC 60811-2-1 | % % | max 100 max 15 |
| Carbon black content | ASTM D1603 | % | 2.5±0.5 |

*Typical values reported above (except MFI) are obtained from samples cured in hot water (2.5 hours @ 95°C).

Processing Guidelines

1- The grafted polymer should never be preheated.

2- The grafted polymer (APXLP12BC) and Catalyst master batch (APCAT12N) should be manually mixed at a ratio 95:5 at room temperature, just before consumption. Mixing in large quantities should be avoided, since such leftover premix cannot be stored.

3- The actual extrusion conditions will depend on the type of equipment used. The following conditions may be used as a

guide when starting up the extruder.

| | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Head | Die | Screw* |
|----------|--------|--------|--------|--------|------|-----|--------|
| max (°C) | 150 | 160 | 170 | 180 | 190 | 220 | 220 |
| min (°C) | 140 | 150 | 160 | 170 | 180 | 210 | 200 |

*The thermostatic control of the screw improves processing results.

Extruder L/D= 20-26

- 4- Head and tools should be designated allowing streamlined flow avoiding stagnation of the material.
- 5- It is important that extruder should not be kept idle for more than 15minutes when filled with grafted polyethylene (APXLP12BC) and catalyst (APCAT12N) premix.
- 6- In case of line stop longer than 10 - 15 minutes: Before restarting purge with standard HDPE (MFI: 0.3g/10 min.)

Cross linking

Depending on the end product thickness duration of cross linking can be vary, under following conditions:

- By immersion in 90°C hot water, 2-6 hrs.
- By exposure to low pressure water steam, 6-15 hrs.

Storage

- Packaging should be keep closed during storage
- Ambient temperature should not exceed more than 35°C
- Avoid direct exposure to sunlight and humid weathering
- APXLP12BC can be stored for 6 months after production
- Compound should be used maximum 3-4 hours after opening packaging

Packaging

It is available in the form of pellets and supplied in aluminum multi-layer bags with a net content of 25 kg.

Safety

APXLP12BC is classified as no-dangerous material.

Technical Service

Abhar Polymer Compounds Technical Service is available to help the customer to choose the best product for his requirements.

Our Technical Service is at your disposal for further information and advice about the start-up and also for any possible necessity during the use of the product.

Disclaimer

The data and numerical results contained in this document are provided for the sake of general information and are given in good faith. They reflect the state of our knowledge at the time of publication. Because the possibilities and application conditions of our product are many and varied, and lie beyond our control, we can in no event be held responsible if all the necessary information on planned applications have not been formally brought to our attention. The information presented here cannot be considered as a suggestion to use our products without taking into account existing patents, or legal provisions or regulations, whether national or local. The purchaser alone assumes the duties of information and advice for the ultimate user. Specifications reported on this datasheet cannot be used as reference values in a technical or sales contract. Abhar Polymer Compounds can in no event be held responsible for a possible failure on the part of the purchaser to respect these regulations, provisions and duties.