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COGEGUM[®] PFR 120

HALOGEN FREE FLAME RETARDANT COMPOUND FOR RIGID PIPES AND CONDUITS

This is a thermoplastic polyolefin compound containing a fire retardant system that contributes to give the pipe and/or final product self-extinguish properties without any emission of halogens and acid. In addition, the emission of toxic and corrosive gases and also the smoke generation is particularly reduced. These characteristics make this compound suitable in all applications where the fire behaviour of pipe products and other materials is one of the main factors to be considered in establishing a high safety level in public places like tunnels, undergrounds, airports, hospitals, railway stations, etc.

COGEGUM[®] PFR 120 offers outstanding mechanical and physical properties and also good oil resistance.

| PHYSICAL AND MECHANICAL PROPERTIES | Typical Value | Unit | Test Method |
|--|---------------|-------------------|-------------------------------------|
| Density at 23°C | 1,54 | g/cm ³ | ASTM D-792 |
| MFI, 190°C/21,6 Kg | 10 | g/10' | Solvay Padanaplast based on ISO1133 |
| Hardness, Shore D | 65 | -- | ISO R 868 |
| Tensile Strength | 17 | MPa | ISO 527 |
| Tensile Modulus at 23°C | 1750 | MPa | ISO 527 |
| Flexural Modulus at 23°C | 2240 | MPa | ISO 178 |
| Vicat - 1Kg - | 125 | °C | ISO 306 |
| Impact Charpy (7,5 J Unnotched) | 85 | kJ/m ² | ISO 179/eU |
| Impact Charpy (2 J notched) | 30 | kJ/m ² | ISO 179/eU |
| Smoke Density - Dmc - | | - | ASTM E 662 |
| Flaming Mode | 80 | | |
| Non Flaming Mode | 349 | | |
| Time to DS Max Fl. / Non Fl. (min) | 14' / 16' | | |
| Cone Calorimeter (Irradiance 35 kW/m²) | | | |
| Total Heat Release (Max value) | 93,5 | | MJ/ m ² |
| Effective Smoke Production | 0,09 | | m ² /g |
| Mass Loss | 46 | | (%) |
| Resistance to Flame Propagation (1 kW) | pass | | EN 50086-1 |
| Halogen acid gas emission | < 0,1 | % | IEC 60754-1 |
| Oxygen Index | 38 | % | ASTM D 2863 |
| Resistance to ASTM 2 oil (24 hours at 100°C) | | | IEC 60811 |
| - variation on tensile strength | <-15 | % | |
| - variation on elongation at break | <-15 | % | |

Typical values reported above are the average obtained from injected plates.

Processing

COGEGUM® PFR 120 is processed using extruders having an adequate thermoregulation of the barrel and equipped of low compression single screw. The process can be improved further by adding 0,5% of MB Poliflow PX1.

The following temperature profile is indicated:

| | |
|---------------|-------------------|
| barrel zones: | from 120 to 150°C |
| head: | 160°C |
| die: | 160°C |
| screw: | neutral |

It shall be considered that the temperature profile may depend also on the design of the available equipment but in any case the melt temperature shall not exceed 170°C.

At high extruder output the pressure / temperature monitoring in the cross-head is suggested.

COGEGUM® PFR 120 can be processed with a wide range of colour and UV masterbatches.

Storage

The product should be stored under the following conditions:

- closed and unbroken bags
- ambient temperature not exceeding 35°C
- avoid direct exposure to sunlight and direct weathering conditions
- use of the compound within 12 hours after bags are opened

The product could undergo alterations due to the extended period of storage. Solvay Padanaplast suggests the product use within twelve months from the production date printed on the packaging.

Solvay Padanaplast accepts no liability of any kind in case the above mentioned conditions are not fulfilled.

Packaging

COGEGUM® PFR 120 is supplied in standard 1250 Kg pallets, composed of 25 Kg moisture resistant bags or 1000 Kg carton boxes containing a single moisture resistant bag.

Technical Service

Solvay Padanaplast Technical Service is available to help the customer to choose the best product solution for his specific needs.

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 is obliged to verify whether the possession, use or marketing of our products is subject within his territory to particular rules, especially with respect to public health, hygiene and worker and/or consumer safety. The purchaser alone assumes the duties of information and advice for the ultimate user. Specifications reported on this datasheet can not be used as reference values in a technical or sales contract. Solvay Padanaplast can in no event be held responsible for a possible failure on the part of the purchaser to respect these regulations, provisions and duties.

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