



## Technical Data Sheet

### PTAcross1105/1213

Cross-linkable Polyethylene

#### Product Description

PTAcross 1105 is a cross-linkable natural polyethylene compound, specially designed for Wire and Cable insulation applications.

The PTAcross 1105 base material in combination with the PTAcross 1213 catalyst master-batch will accelerate the moisture-induced and contains permanent scorch retardant additives which ensure safe processing and gives a possibility to use a highly active crosslinking catalyst.

Addition of PTAcross 1213 to PTAcross1105 lead to excellent thermo - oxidative stability also in contact with copper as well as aluminum.

PTAcross 1105 is used with PTAcross 1213 (a catalyst master-batch) in the ratio of 95:5

#### General

|                   |                            |                        |              |
|-------------------|----------------------------|------------------------|--------------|
| Features          | • Clean/High Purity        | • Excellent Processing |              |
| Uses              | • Appliance Wire Jacketing | • Cable Jacketing      | • Insulation |
| Processing Method | • Extrusion                |                        |              |
| Additives         | • Anti-oxidant             | • Metal Deactivator    |              |
| Appearance        | • Natural                  |                        |              |
| Form              | • Pellets                  |                        |              |
| Packaging         | • 25 Kg sacks              |                        |              |

| Physical                               | Typical Value | Unit              | Test Method |
|--|---------------|-------------------|-------------|
| Density                                | 0.93±0.05     | g/cm <sup>3</sup> | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (190°C/5 kg) | 3.0±1.0       | g/10 min          | ASTM1238    |

| Thermal                                 | Typical Value | Unit | Test Method   |
|---|---------------|------|---------------|
| Hot Set test(200 <sup>0</sup> c,0.3Mpa) |               |      | IEC 60811-2-1 |
| Elongation under load                   | <80           | %    |               |
| Permanent deformation                   | <10           | %    |               |

| Ageing   | Typical Value | Unit | Test Method |
|--|---------------|------|-------------|
| Change of Tensile after Ageing (135 <sup>0</sup> c,168 hr) | <15           | %    |             |



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| Mechanical                  | Typical Value | Unit         | Test Method |
|-----------------------------|---------------|--------------|-------------|
| Tensile Strength            | >16           | MPa          | ISO527      |
| Elongation (Break)          | >400          | %            | ISO527      |
| Electrical                  | Typical Value | Unit         | Test Method |
| Dielectric Constant (50 Hz) | < 2.3         | -            | IEC 60250   |
| Dissipation Factor (50 Hz)  | < 0.0005      | -            | IEC 60250   |
| DC Volume Resistivity       | 10P           | $\Omega$ .cm | IEC 60093   |
| Dielectric Strength         | > 22          | kV/mm        | IEC 60243   |

#### Extrusion

As a guide the following temperature profile is recommended:

| Zone 1 | Zone 2 | Zone 3 | Zone 4 | Head | Die |
|--------|--------|--------|--------|------|-----|
| 130    | 150    | 170    | 190    | 210  | 220 |

#### Storage

This product should be stored in dry place away from sunlight.