

Technical specification

ER&GE[®] PPC sheets

Product description and field of application

ER&GE[®] PPC extruded polypropylene co-polymer sheets are typically used as a fabrication material for the manufacture of storage tanks, process engineering components, linings and fans.

The PPC sheets display high levels of strength, low temperature impact strength, heat and heat ageing and chemical resistance. The material is free from heavy metals and is physiologically harmless and can be used in applications in the food sector.

Sheets are available in standard, UV resistant, flame-retardant, anti-static and corona-treated variants with various embossed finishes. Both standard and custom made sheet sizes and colours are available.

Standard plastics fabrication equipment may be used for the fabrication of ER&GE[®] PPC sheets. ER&GE[®] PPC sheets are suitable for vacuum forming.

| Product feature | Unit | Value | Comments |
|---------------------|------|------------------|---|
| Standard sizes | mm | 2,440 x 1,220 | |
| | mm | 3,040 X 1,220 | |
| | mm | 3,000 X 1,500 | |
| | mm | 2,000 X 1,000 | |
| Other sizes | | | custom manufactured to order |
| Size tolerance | mm | | according to EN ISO 15013 |
| Rectangularity | mm | | according to EN ISO 15013 |
| Gauges | mm | 1.0 - 15.0 | |
| Thickness tolerance | | | according to EN ISO 15013 |
| Colours | | | natural and various standard colours available |
| Surface textures | | | smooth, matt, pinseal, leathergrain and Stag |
| Protective film | | | available on top or both side(s) (smooth and matt surfaces only) |
| UV protection | | | black colour provides good UV resistance, natural material and other colours may require the use of UV stabiliser at the time of manufacture (custom manufactured to order) |
| Anti-Static | | | anti-static material is custom manufactured to order |
| Corona treatment | | | corona treated material is custom manufactured to order |

Mechanical and thermal and other technical properties

| Property | Unit | Test method EN ISO | Value |
|--|-----------|--------------------------|-------|
| Density | +23° C | g/cm ³ 1183 | 0.91 |
| Flexural modulus | | 178 | 1150 |
| Tensile modulus | MPa | 527-2 | 1100 |
| Tensile Strength Yield (v = 50 mm/min) | MPa | 527-2 | 24 |
| Elongation at Yield (v = 50 mm/min) | % | 527-2 | 13 |
| Izod notched impact strength | +23° C | kJ/m ² 180/1A | >50 |
| | -20° | kJ/m ² 180/1A | 6 |

| | | | | |
|--|------|----------|-----------------------------|--------------------|
| | C | | | |
| Hardness Shore D | | - | 868 | 60 |
| Vicat softening temperature VST/A/50 (10 N) | | ° C | 306 | 148 |
| Heat deflection temperature, 0.45 Mpa (HDT B) | | ° C | 75-2 | 90 |
| Linear Co-efficient of Expansion | +20° | | DIN 53752 | 1×10^{-4} |
| | C | | | |
| Fire rating | +90° | | DIN 53752 | 2×10^{-4} |
| | C | | | |
| Fire rating | | | BS476 Part 7 | Class 4 |
| | | | MVS 302 (≥ 1 mm) | passes |
| | | | UL 94 HB (internal test) | passes |
| | | | DIN IEC 93 | $>10^{14}$ |
| Surface resistivity | +23° | Ω | | |
| | C | | | |

Please note

The details given in this specification are based on our present knowledge and experience. Although all reasonable care has been taken in the preparation of this document, due to the many variables inherent with the manufacturing processes, the details given do not release the user of our products from making their own tests. Our specification does not represent a legally binding warranty of any particular characteristics. Whilst we strive continuously for faultless quality, it is not possible to assure the general suitability of the product without inspecting the ultimate application. Depending on the circumstances of use, we would recommend you consult us.