Technical Specification

# KCL Formi® 3D rPETG

**Material** KCL Formi® 3D rPETG is high impact resistance grade based on post-industrial and post-consumer PETG thermoformed products (e.g. indoor/outdoor signage, vending machine panels, medical and industrial equipment covers, thermoformed packaging and display systems).

**Manufacturig** PETG is collected, cleaned, shredded, and re-extruded and pelletized into rPETG granules.

**Properties** High impact resistance, good chemical resistance, no pre-drying needed.

**Environment** Made from 100% recycled PETG, reducing virgin plastic use. KCL Formi®3D rPETG is is fully recyclable and suitable for energy recovery.

**Physical and mechanical properties**

| Property | Test method | Transparent | Opaque |
|---|---|---|---|
| Density, g/cm$^3$ | ISO 1183 | 1,27 | 1,27 |
| Tensile strength, 50mm/min, N/mm$^2$ | ISO 527-2 | 45 | 45 |
| Tensile modulus, 1mm/min, N/mm$^2$ | ISO 527-2 | 2200 | 2200 |
| Elongation at break, 50mm/min, % | ISO 527-2 | 4 | 4 |
| Izod notched impact strength, unnotched +23 ºC , kJ/m$^2$ | ISO 180/1A | 11,5 | 11,5 |
| Charpy impact strength, unnotched +23 ºC , kJ/m$^2$ | ISO 179-2/1eU | NB | NB |
| Linear coefficient of thermal expansion (23-70 °C), K$^{-1}$ | ISO 11359-2 | 51x10$^{-6}$ | 51x10$^{-6}$ |

**Pretreatment** KCL Formi® rPETG in not sensitive to moisture, no pre-drying needed.

**Extrusion** Recommended processing parameters for extrusion are:

| | |
|---|---|
| Temperature profile from the nozzle | 215/190/185/185 ºC |

**Storage** KCL Formi granulates should be protected from UV-light and stored in closed packages in dry conditions at temperature below 50 ºC.