

# 4135 FR

### **Product description**

| Colour | Weight (mg) | Size (mm) | Bulk density (g/l) | Packaging | Approved for<br>direct food<br>contact |
|--------|-------------|-----------|--------------------|-----------|--|
| Grey   | 0.8         | 2.0 - 4.0 | 32.0 – 38.0        | Bag       | No                                     |

### **Physical properties**

|   | Test method                   | 40g/l                       | 60g/l                       |
|---|-------------------------------|-----------------------------|-----------------------------|
| Compressive strength                                | ISO 844                       |                             |                             |
| 25% strain (kPa)                                    | 5mm/min                       | 210                         | 340                         |
| 50% strain (kPa)                                    |                               | 300                         | 475                         |
| 75% strain (kPa)                                    |                               | 600                         | 1,000                       |
| Compression set<br>25% strain – 22 hours – 23°C (%) | ISO 1856 C<br>Stabilising 24h | 11.5                        | 11.5                        |
| Burn rate (mm/min)                                  | ISO 3795<br>12.5mm thick      | 0<br>Self-<br>extinguishing | 0<br>Self-<br>extinguishing |
| Burn classification*                                | UL 94<br>3 – 13mm thick       | HF-1                        | HF-1                        |

ARPRO 4135 FR is flame retardant and free of halogenated components\*\*

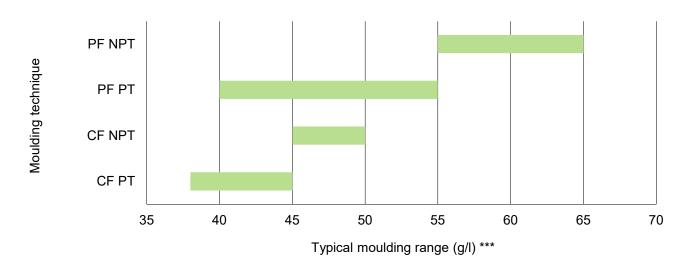
\* See UL website for classification.

\*\* Free of halogenated components according to UL 746 H. For moulded densities above 60g/I, the burn classification is not applicable.

### Moulding

ARPRO 4135 FR can be moulded using Crack Fill (CF) and Pressure Fill (PF):

Crack fill: applied to either Pre-Treated (PT) or Non-Pre-Treated (NPT) ARPRO. Pressure fill: applied to either Pre-Treated (PT) or Non-Pre-Treated (NPT) ARPRO.



\*\*\* Shrinkage, surface aspect and cycle time are influenced by process parameters, tool and equipment layout, and part geometry.

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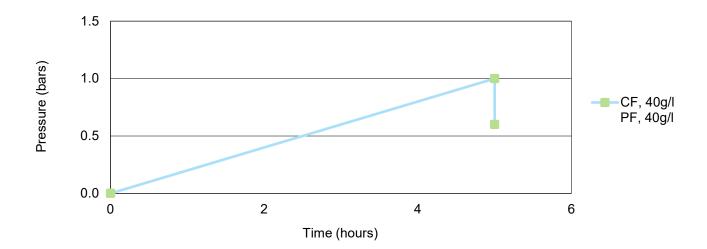
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### **Pre-treatment**

Recommended pre-treatment cycle with pressure tank environment and incoming compressed air both at 23°C: 5 hours up to 1 bar, decrease and maintain at 0.6 bar throughout production.



Pre-treatment cycles can be adapted according to moulding process, density and part geometry:

If internal cell pressure is too high, this may lead to fusion issues. In this case, decrease time, pressure or temperature to improve fusion.

Increase time, pressure or temperature to reduce moulded density and improve aspect.

Operating the pressure tank above ambient temperature, up to a maximum of 50°C, significantly shortens pretreatment time.

### Post-treatment

For moulded densities below 50g/l and depending on the parts dimensions, post-treatment at a temperature of 80°C is recommended for 3 to 8 hours. This helps to remove water content, as well as ensuring dimensional stability and a geometric shape.

### Shrinkage

Typical values range from 1.8% to 2.2%. Trials are recommended to determine the exact part shrinkage values. The higher the moulded density, typically the lower the shrinkage.

### Storage

A storage temperature above 15°C is strongly recommended.

Indoor storage strongly recommended.

If stored outdoors, it is strongly recommended to keep the material indoors for 24 hours before moulding.

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