

Trifilon Revo[®] 1041

Art nr: Revo1041-10510-1

Natural Fiber Reinforced Polypropylene

1. Designation of product, preparation and manufacturer

1.1 Trade name:	Trifilon Revo1041
1.2 Use of product:	Plastic compound for manufacture of injection moulded parts.
1.3 Manufacturer:	Trifilon AB Flättnaleden 6 611 45 Nyköping Sweden
1.4 Type of machine equipment:	Designed for use on standard screw injection molding machine with open nozzle and non-return flow valve.

2. Processing conditions for injection moulding

2.1 Processing Temperatures:	Values	Units
Feeding zone	30-50	°C
Zone 1	150-160	°C
Zone 2	160-175	°C
Zone 3	175-190	°C
Zone 4	190-205	°C
Machine nozzle	190-205	°C
Mass temperature	190-205	°C
Hot Runner System	190-210	°C
Mould temperature	20-50	°C

3. Machine settings for injection molding

3.1 Machine settings:	Values	Units
Screw rotation speed	<250	rpm
Back pressure	30-80	bar
Shot volume (of max shot volume)	>1-3	-
Injection speed	Medium-High	-
Holding pressure level (of parts max injection pressure in bar)	40-70	%
Holding pressure time (of total cooling time in sec)	20-40	%
Melt cushion (of part shot volume)	10-15	%
Ejection temperature	<120	°C

General advice: We recommend similar processing parameters to Polypropylene. We also recommend cold runner systems and suitable sprue, gate and venting design to enable the optimal filling of the mold with a natural fiber reinforced polymer. If a hot runner system is used, we recommend an open gate design with a minimum gate diameter of 1mm. If possible, a pin value is recommended.

4. Machine cleaning advice

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| 4.1 Prior to production: | To ensure optimal results, purge injection molding machine with Polypropylene or relevant purging compound. |
| 4.2 During production: | Ensure that tooling and screw zones are set to the recommended temperatures. If tool is not filled, increase temperature stepwise. Material has a tendency to burn and therefore needs a constant melt flow. Avoid temperatures above 210°C as natural fibers in compound will begin to rapidly degrade and could ignite. |
| 4.3 Post production: | Ensure that injection molding machine is purged with Polypropylene or relevant purging compound. |
| 4.4 General advice: | To avoid risk of material degradation and possible risk of pyrolysis, the dwell time of the material inside the machine should be minimized as much as possible. |

5. Tooling maintenance advice

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| 5.1 Prior to production: | To ensure optimal results, apply a conventional mold release to the tooling prior to production. |
| 5.2 During production: | Trifilon resins may leave hemp residuals on the tooling surface. These residuals are non-toxic, non-corrosive, non-oxidative and can be removed with a standard cold degreasing agent. |
| 5.3 Post production: | To remove any hemp residuals from the tooling surface, use a standard cold degreasing agent in combination with a mildly abrasive scouring pad or cloth. Follow the instructions provided with the standard degreasing agent. |
| 5.4 General advice: | Trifilon resins may leave hemp residuals on general purpose tooling steel (e.i. P20). These residuals do not damage the tooling surface and can be removed with a standard degreasing agent. |

6. Storage and drying conditions

- 6.1 General advice: Trifilon Revo1041 is a natural fibre reinforced thermoplastic compound based on recycled polypropylene. Residual moisture content of more than 0.3 % can result in evaporation during the injection process or in condensed moisture on the mould. To avoid problems related to evaporation, ensure material is thoroughly dried prior to use.
- 6.2 Storage conditions: Store in a cool, dry location. Ensure good housekeeping practices during storage, transfer and handling of material. Keep octabins and big bags closed to prevent contamination. Opened goods should be used immediately or adequately resealed to avoid moisture uptake and contamination.
- 6.3 Storage conditions for finished products: It is recommended to store the finished goods in a cool, dry place. Depending on the storage conditions and processing conditions used to mold the products, storage time may vary. Trifilon AB cannot provide any shelf life guarantees for finished goods. It is recommended that customers perform their own storage tests to adapt to their product and general storage environments.
- 6.4 Drying advice: To ensure optimal results, drying is recommended at 80 - 100 °C for a period of 2 - 4 hours using a desiccant dryer. The recommended drying time can vary depending on storage conditions of material.

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