

# Technical data sheet Breakaway

Ultimaker

<b>Chemical composition</b>	See Breakaway safety data sheet, section 3
<b>Description</b>	Ultimaker Breakaway is a support material for multi-extrusion 3D printing. Breakaway supports can be quickly removed and do not need further post-processing to give a smooth finish to your 3D print. Designed for a hassle-free 3D printing experience, Breakaway provides good adhesion to most of the Ultimaker material range, including ABS
<b>Key features</b>	Good bonding to a variety of build materials, robust support while still weak and ductile enough to remove from the model. Longer shelf life and less moisture sensitivity compared to water-soluble support materials
<b>Applications</b>	Breakaway support material for Ultimaker ABS, Nylon, PLA, CPE, and CPE+
<b>Non-suitable for</b>	Intricate, internal geometries where the support is not accessible for removal. Delicate objects with tiny details. Food contact and <i>in vivo</i> applications. Swelling or elution might occur against oils or organic solvents

## Filament specifications

	<b>Value</b>	<b>Method</b>
<b>Diameter</b>	2.85 ± 0.05 mm	-
<b>Max roundness deviation</b>	-	-
<b>Net filament weight</b>	750 g	-
<b>Filament length</b>	~ 96 m	-

## Color information

<b>Color</b>	<b>Color code</b>
Breakaway White	RAL 9010

## Thermal properties

	Typical value	Test method
Melt mass-flow rate (MFR)	3 - 6 g/10 min	ISO 1133 (220 °C, 2.16 kg)
Heat detection (at 0.455 MPa)	-	-
Heat deflection (at 1.82 MPa)	-	-
Vicat softening temperature	145.5 °C	ISO 306 (Method A, 1N, 120 °C/h)
Glass transition	-	-
Coefficient of thermal expansion	-	-
Melting temperature	-	-
Thermal shrinkage	-	-

## Other properties

	Value	Test method
Specific gravity	1.22	ASTM D792
Flame classification	-	-

## Disclaimer

Any technical information or assistance provided herein is given and accepted at your risk, and neither Ultimaker nor its affiliates make any warranty relating to it or because of it. Neither Ultimaker nor its affiliates shall be responsible for the use of this information, or of any product, method or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability or fitness of any product; and nothing herein waives any of Ultimaker's conditions of sale. Specifications are subject to change without notice.

**Version** Version 1.003

**Date** November 19, 2018