

Addigy[®] P3001

Type Additive manufacturing thermoplastic copolyester grade for powder bed fusion such as Selective Laser Sintering (SLS).
High powder flowability, useful for e.g. roller or blade coating systems.

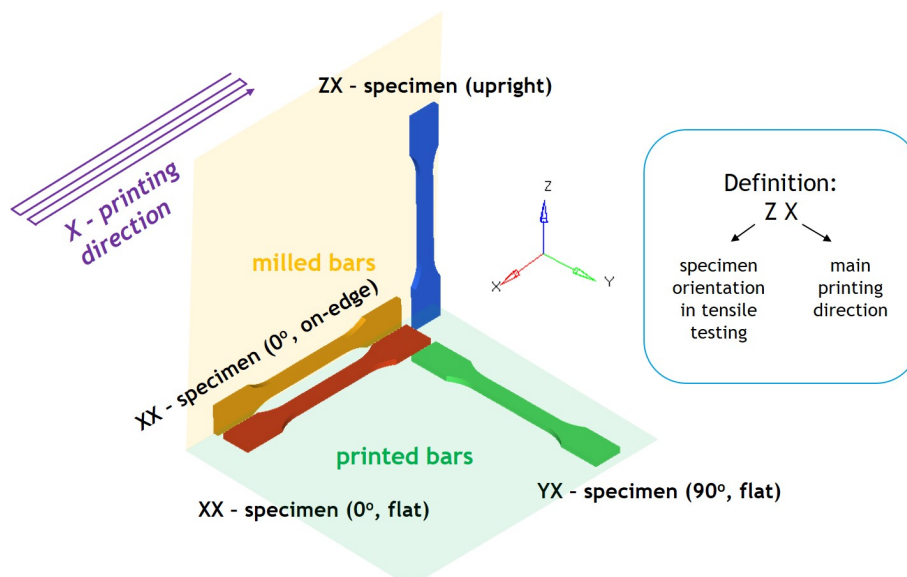
Characterization

- Soft elastomer material
- Exceptional rebound properties
- Excellent elongation at break
- Easy processing without odors
- Soft touch and feel
- Can be post-processed for smooth surfaces, including thin wall parts
- Material is compliant with ISO 10993-5 cytotoxicity & ISO 10993-10 skin irritation. All biocompatibility assessments have been conducted on post-processed, smoothed end-products made with Addigy[®] P3001.

Uses

- Footwear
- Protective gear such as sports guards
- Consumer goods
- Components that need to comply with the Toy Safety Directive 2009/48/EC
- Parts requiring biocompatibility approval

Printing directions



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Other data* Property	Specimen	Value	Unit of measurement	Method
Appearance		Off-white		
Melt volume rate 230 °C; 2.16 kg		38	cm ³ / 10 min	ISO 1133
Density		approx. 1080	kg/m ³	internal method
Bulk density	powder	420 - 500	kg/m ³	ISO 60
Hausner ratio	powder	1.25		ISO 787-11
Thermal properties				
Melting point 10 °C/min	powder	160	°C	ISO 11357-1/-3
Glass transition temperature 10 °C/min	powder	-65	°C	ISO 11357-1/-2
Mechanical properties				
Shore hardness A	X-X direction, flat	88		ISO 868
Shore hardness A	Z-X direction, upright	87		ISO 868
Shore hardness D	X-X direction, flat	37		ISO 868
Tensile modulus	X-X direction, flat	50	MPa	ISO 527-1/-2
Tensile modulus	Z-X direction, upright	42	MPa	ISO 527-1/-2
Tensile strength at break	X-X direction, flat	10	MPa	ISO 527-1/-2
Tensile strength at break	Z-X direction, upright	5.5	MPa	ISO 527-1/-2
Elongation at break	X-X direction, flat	> 250	%	ISO 527-1/-2
Elongation at break	Z-X direction, upright	50	%	ISO 527-1/-2
Compression set	under constant strain at 23 °C	24	%	ISO 815-1 (type B)

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Abrasion resistance	printed specimen	39	mm ³	ISO 4649 method A
Rebound resilience	printed specimen	76	%	ISO 4662

Specimen printed on a Prodways P2000.

Built room temperature: 125°C, layer height: 0.12 mm, laser power: 40- 50 W, scan speed: 12700 mm/s, hatch distance: 0.2 mm, double scan.

*These values provide general information and are not part of the product specification.

Packaging

Powder grades are supplied in airtight, moisture-proof packaging.

Storage

The product should be stored in its original packaging at all times.

If bags or containers have been opened, they must then be sealed again to ensure proper further storage.

Prolonged exposure of bags or containers containing Addigy[®] powders to light or light sources containing UV rays should be avoided. UV radiation will lead to degradation especially, but not limited color changes of the powders.

Constant, normal room temperature with minimal fluctuations and low to normal humidity is essential.

Storage time

Covestro represents that, for a period of twentyfour months following the day of shipment as stated in the respective transport documents, the product will meet the specifications or values set forth in section "specifications or characteristic data" above, whatever is applicable, provided that the product is stored in full compliance with the storage conditions set forth in and referenced under section "storage" above and is otherwise handled appropriately.

The lapse of the twentyfour months period does not necessarily mean that the product no longer meets specifications or the set values. However, prior to using said product, Covestro recommends to test such a product if it still meets the specifications or the set values. Covestro does not make any representation regarding the product after the lapse of the twentyfour months period and Covestro shall not be responsible or liable in any way for the product failing to meet specifications or the set values after the lapse of the twentyfour months period.



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Labeling and statutory requirements This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently **valid Safety Data Sheet**.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

This product is not designated for the manufacture of a medical device or of intermediate products for medical devices¹⁾. [This product is also not designated for other specifically regulated applications (e.g. including cosmetics, plant protection, fertilisers, plant strengtheners, food processing, food contact and others). If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices or for other specifically regulated applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose.] Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro.

1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document.
Edition: January, 2018

Editor: Coatings, Adhesives & Specialties
Covestro Deutschland AG
Kaiser-Wilhelm-Allee 60
51373 Leverkusen, Germany
www.covestro.com

Contact:
Covestro Additive Manufacturing
e-mail: additive.manufacturing@covestro.com