

Impranil[®] eco DL 1878

Characterization

Anionic aliphatic polyester-polyurethane dispersion.

Impranil[®] eco DL 1878 is suitable for the formulation of textile coatings for use in numerous applications.

- outer wear
- bags / luggage
- flocked articles
- technical articles

Form supplied

White low-viscosity dispersion in water with a solids content of approx. 50 %

Specification

Property	Value	Unit of measurement	Method
Viscosity at 23 °C, D 40 s ⁻¹	≤ 1,200	mPa·s	DIN EN ISO 3219/A.3
pH-value	7 ± 1		DIN ISO 976
Non-volatile content, (0,9 – 1,1 g/1 h / 125 °C)	50 ± 2	%	DIN EN ISO 3251

Special properties

- Moderate hydrolysis
- Good adhesion
- High solids content
- Good stirring stability
- Good lightfastness
- Soft handle

Other data*

Property	Value	Unit of measurement	Method
Density at 23 °C	1.1	g/cm ³	DIN EN ISO 2811/3
Carbon-content based on biobased ¹	approx. 56	%	calculated value

¹ Calculated minimum content of carbon derived from bio-based raw materials. Confirmed by ¹⁴C-Measurements according to ASTM D 6866: 2008.

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

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Film properties*

The data given below are average values measured in approx. 0.1 mm transparent films of Impranil[®] eco DL 1878 thickened with 2 % Borchi[®] Gel ALA (OMG Borchers)

Property	Value	Unit of measure	Test method
100 % modulus	1.7	MPa	DIN 53504
Tensile strength	12	MPa	DIN 53504
Elongation at break	800	%	DIN 53504
Lightfastness	7		DIN EN ISO 105-B02
Volume swelling (2 h at room temperature)			
- ethyl acetate	310	%	
Volume swelling (16 h at room temperature)			
- water	20	%	
Melting range (uncrosslinked)	220 - 240	°C	Kofler heating table

The volume swelling decreases again as the solvents evaporate. This product shows crystallization behavior after drying. The onset and degree of crystallization heavily depends upon the storage condition, period of storage, film forming condition and where it is used. The crystallized product is slightly stiffer than before its crystallization.

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Storage

- Storage in original sealed Covestro container.
- Recommended storage temperature: 5 - 25 °C.
- Protect from frost, heat and foreign material.

General information: The product cannot be used if it has been frozen. The containers must be well closed to prevent the evaporation of water which may result in the formation of a non-redispersible film. Brief heating to max. 50 °C has no adverse effect on product properties.

Storage time

Covestro represents that, for a period of twelve 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, what ever 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 twelve 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 twelve 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 twelve 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.
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Product Datasheet