

# Desmoderm<sup>®</sup> 43191 Granular

<b>Type</b>	Desmoderm 43191 Granular is a one-component polyester polyether urethane based on an aromatic diisocyanate.
<b>Form supplied</b>	Granules
<b>Uses</b>	Desmoderm 43191 Granular is used as the flexible component in the polyurethane coagulation process. Desmoderm 43191 Granular is suitable for use in the manufacture of materials for shoe linings, shoe uppers, clothing and bags/luggage.

## Product specification

Property	Value	Unit of measure	Test method
Viscosity at 23 °C (20 % in dimethylformamide)	23	°C	DIN EN ISO 3219/A.3
Untempered	4,000 – 20,000	mPa·s	
Tempered (5 h, 120 °C)	4,000 – 40.000	mPa·s	

Viscosity can be measured using e.g. a Haake Viscotester VT 23 rotational viscometer(E 100 test body).

## Special properties

- Soft
- Fine coagulation structure
- Low coagulation rate
- Good resistance to hydrolysis and alkalis

## Processing/application

### Solutions

For coagulation, Desmoderm 43191 Granular is dissolved in dimethylformamide to give an approx. 25 % solution.

Desmoderm 43191 Granular can only be mixed with the following other Desmoderm products:

An increase in temperature during the dissolving process is beneficial. However, the temperature must be controlled as a function of the solvent mixture used.

We suggest using a dissolver with toothed disc and a closed vessel with a curved base.

The dissolving of granular products in the chosen solvents is a function of the stirring apparatus and vessel used, the stirring speed and the temperature.

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At the start of the dissolving process, granules which have already swollen may adhere to the vessel walls.

These can later detach as the coating is filled into the coating vessel, thus disrupting the coagulation process.

The solutions must therefore be filtered before use.

As the solids content may change at high temperatures due to solvent evaporation, particularly when low-boiling solvents are used, we recommend that the solids content be checked after filtration.

## Thinning

The 25 % solution of Desmoderm 43191 Granular can be thinned with dimethylformamide.

## Additives and auxiliaries

### Pigments

Desmoderm 43191 Granular can be colored with pigment preparations such as

- Levanyl® LF Fine Pastes and
- Levanox® Fine Pastes.

Additions of Levanyl/Levanox Fine Paste should be approx. 1 – 5 %, calculated on the total paste formulation.

### Dissolving aids

The addition of 0.2 – 2.0 % (on solids) of dissolving aids such as Entschäumer® L and Bentone® SD-2 accelerates the dissolving process.

### Antifoams

The addition of 0.2 – 0.5 % (on solids) Baysilone® Fluid OF-OH 502 yields a significant improvement in the deaeration process.

### Flow promoters

The addition of 0.2 % (on solids) Imprafix® VM improves the flow properties of the polyurethane paste.

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## Applications

Desmoderm 43191 Granular can be mixed with the following other Desmoderm products:

- Desmoderm KEN Granular
- Desmoderm KB2H Granular
- Desmoderm KBH Granular
- Desmoderm KCW Granular
- Desmoderm XP 2426
- Desmoderm KB2W

The content of Desmoderm 43191 Granular in the mixture should not exceed 80 %.

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## Film properties\*

The data given below are average values measured in approx. 0.1 mm transparent films of Desmoderm 43191 Granular.

Property	Value	Unit of measure	Test method
100 % modulus	4	MPa	DIN 53504
Tensile strength			
- original	30 - 40	MPa	DIN 53504
- after 14 d hydrolysis (70 C, 95 % rel. humidity)	25 - 35	MPa	DIN 53504
Elongation at break	650 - 750	%	DIN 53504
Lightfastness	3		DIN 54004
Softening range	190 - 200	°C	Kofler heating table

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

## Storage

When stored at room temperature (20°C), Desmoderm 43191 Granular will remain stable for 12 months.

## Safety

The product is not classified as dangerous under the relevant EC Directives and corresponding national regulations valid in the individual EU member states. In countries outside the EU, compliance with the respective national legislation concerning the classification, packaging, labeling and transport of dangerous substances must be ensured.

The safety data sheet should be observed. This contains information on labeling, transport and storage as well as on handling, product safety and ecology.

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