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Desmodur® E 22700

## Desmodur® E 22700

High-performance, flexible waterproofing  
for spray applications



## A versatile aromatic prepolymer: For polyurea and hybrid polyurea waterproofing membranes

Modern waterproofing membranes demand high mechanical performance, long-term durability, and easy application. In particular, aromatic polyurea and hybrid polyurea coating systems are increasingly in demand, due to their fast curing, excellent mechanical properties, and cost-effectiveness.

To meet the needs of this growing market, Covestro developed Desmodur® E 22700: a high-performance, flexible, and easy-to-process solution for demanding environments.

### Flexible performance, long-lasting toughness

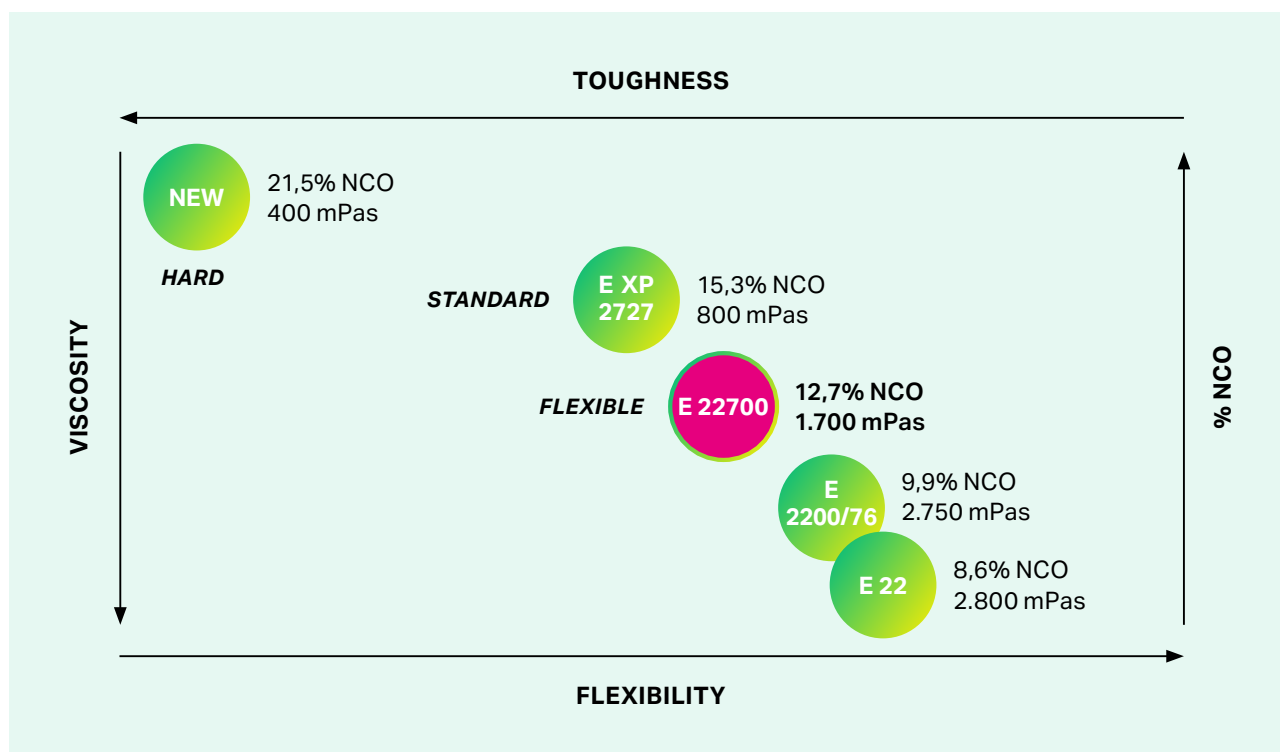
Desmodur® E 22700 is an MDI-based aromatic prepolymer developed specifically for 2K spray polyurea (PUA) and hybrid PUA waterproofing membranes. It offers enhanced flexibility while

maintaining a relatively low viscosity of 1,700 mPa·s without added solvents or plasticizers, for easy handling and spray processing, and delivering high toughness and consistent film build even in thick-layer and horizontal applications.

Desmodur® E 22700 contains no added plasticizers or solvents like propylene carbonate. This ensures that the final membrane maintains its mechanical integrity over time.

Compatible with both amine and polyol curatives, Desmodur® E 22700 can be formulated for use in applications including car park flooring, swimming pools, bathrooms, wet rooms, and underground structures. For hybrid PUA systems, Covestro can supply matched polyols, providing you with a complete set of ingredients.

### Desmodur® E 22700 in context:



Visualization of Desmodur® E 22700 properties compared to other products in Desmodur range

| PRODUCTS & PROPERTIES                       | 2K HOT SPRAY PUA         |                           |                                    |                                   | 2K COLD PUA<br>(Hand-applied) |                             |
|---|--------------------------|---------------------------|------------------------------------|-----------------------------------|-------------------------------|-----------------------------|
|   | AROMATIC                 |                           | ALIPHATIC                          |                                   | AROMATIC                      | ALIPHATIC<br>(Polyaspartic) |
|   | Pure PUA                 | Hybrid PUA                | Pure PUA                           | Hybrid PUA                        |                               |                             |
| <b>ISO part</b>                             | E XP 2727                | E 22700                   | Quazi IPDI-<br>prepolymer          | ultra N 31100                     | ultra E 15                    | ultra N 31100 /<br>E 30700  |
| <b>AMINE part</b>                           | Polyether<br>amine DETDA | Polyether<br>polyol DETDA | Polyether<br>amine IPDA<br>(DETDA) | PES/PET polyol<br>IPDA<br>(DETDA) | Aromatics<br>Diamine          | Polyaspartics               |
| <b>Tensile strength (N/mm<sup>2</sup>):</b> | 15 - 25                  | 15 - 20                   | 10 - 20                            | 10 - 20                           | 5 - 10                        | 5 - 10                      |
| <b>Elongation (%):</b>                      | 300 - 500                | 500 - 800                 | 300 - 500                          | 100 - 250                         | 400 - 800                     | 150 - 250                   |
| <b>Tear resistance (N/mm):</b>              | 40 - 120                 | 40 - 80                   | 40 - 90                            | 40 - 60                           | 30 - 40                       | 10 - 20                     |
| <b>Shore hardness A / D:</b>                | A-70 / D-60              | A-60 / D-50               | A-60 / D-40                        | A-60 / D-40                       | A -40 -70                     | A -60 -70                   |
| <b>Pot-life*</b>                            | 5 - 10 sec               | 30 - 40 sec               | 30 - 60 sec                        | 25 - 60 sec                       | 20 - 30 min                   | 20 - 30 min                 |
| <b>Curing time*</b>                         | 1 - 2 min                | 2 - 4 min                 | 4 - 6 min                          | 4 - 6 min                         | 2 - 4 h                       | 3 - 6 h                     |
| <b>UV stability</b>                         | low                      | low                       | high                               | high                              | low                           | very high                   |
| <b>Cost</b>                                 | ++                       | +                         | +++                                | +++                               | ++                            | +++                         |

\*Spray conditions: 190 bar / 70 °C

### Key benefits:

- Developed for 2K spray PUA and hybrid PUA systems
- No added plasticizers or solvents for improved mechanical integrity
- High elongation and good tensile strength

### Desmodur® E 22700 at a glance:

- Chemical base: MDI (aromatic)
- Application: 2K spray pure polyurea and hybrid polyurea
- Viscosity: 1,700 mPa·s
- Solids: 100%
- No added plasticizers or solvents

### Interested?

Learn more on our Solution Center:



Covestro Deutschland AG  
Kaiser-Wilhelm-Allee 60  
51373 Leverkusen  
Germany

[solutions.covestro.com](https://solutions.covestro.com)

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<sup>1</sup>Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

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