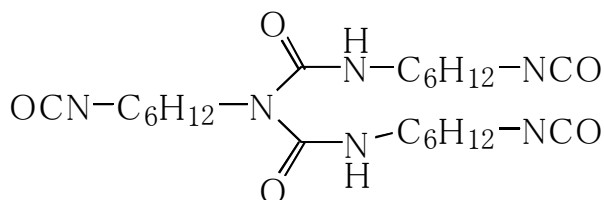


**Type** Aliphatic polyisocyanate (HDI Biuret)



### Features

- # Quick-drying, High hardness
- # Good coating film appearance
- # Good adhesion
- # Good weather resistance

### Applications

- # Two-component applications
- # Plastic coatings
- # Automotive refinishes
- # Automobile, motorcycle ; base coat and top coat
- # Heavy duty coatings

### Typical properties

|                  |  |
|------------------|--|
| Appearance       | Colorless to slightly yellowish clear liquid |
| Non-volatile     | 75 wt%                                       |
| Solvent          | Ethyl acetate                                |
| NCO content      | 15.5 wt%                                     |
| Viscosity        | 170 mPa · s at 25°C                          |
| Color value      | < 1 (Gardner)                                |
| Flash point      | 2.5 °C                                       |
| Relative density | 1.07(20 °C)                                  |

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

**Stability / thinnability**

DURANATE™ 21S-75E can be thinned with esters, ketones and aromatic hydrocarbons such as ethyl acetate, butyl acetate, methoxypropylacetate(PMA), methyl ethyl ketone, methyl iso-butyl ketone, cyclohexanone, toluene, xylene, Solvesso #100 and mixture thereof. Generally speaking, it has good compatibility with the solvent mentioned. However, the solutions formed must be tested for their storage stability.

Only PU grade solvents can be used (max. 0.05% water, absence of reactive groups such as hydroxyl or amines groups). Aliphatic hydrocarbons such as hexane, cyclohexane, methylcyclohexanes and mineral spirits, are unsuitable as solvents because of their poor solubility.

|              |                            |   |
|--------------|----------------------------|---|
| Aromatics    | Toluene                    | + |
|              | Xylene                     | + |
|              | Solvesso#100               | + |
| Esters       | Ethyl acetate              | + |
|              | n-Butyl acetate            | + |
| Ketones      | Methyl ethyl ketone        | + |
|              | Methyl iso-butyl ketone    | + |
| Ether-esters | Methoxypropylacetate (PMA) | + |
| Aliphatics   | Cyclohexane                | ~ |
|              | Methylcyclohexane          | ~ |
|              | Mineral spirit             | ~ |

+ ; Soluble, ~ ; Insoluble

DURANATE™ 21S-75E should not be thinned to below a solid content of 40%.

Prolonged storage of solution with lower solid content may result in turbidity and sedimentation.

## Compatibility

### *With polyisocyanates*

|           |           | <u>Resin solution</u> |
|-----------|-----------|-----------------------|
| DURANATE™ | 24A-100   | +                     |
|           | 22A-75PX  | +                     |
|           | TPA-100   | +                     |
|           | TPA-90SB  | +                     |
|           | TKA-100   | +                     |
|           | MFA-75X   | +                     |
|           | TSA-100   | +                     |
|           | TSS-100   | +                     |
|           | TSE-100   | ~                     |
|           | E-402-90T | +                     |
|           | E-405-80T | +                     |
|           | D-101     | +                     |
|           | D-201     | +                     |
|           | VESTANAT  | T1890L                |
| T1890E    |           | +                     |
| Desmodur  | Z4470     | +                     |

+ ; Soluble, ~ ; Insoluble

Desmodur; Covestro AG, VESTANAT; Evonik

### *With polyols and other resins*

|          |         | <u>Resin solution</u> | <u>Dried film</u> |
|----------|---------|-----------------------|-------------------|
| Acrylic  | A801    | +                     | +                 |
|          | A801-P  | +                     | +                 |
|          | A851    | +                     | +                 |
|          | 50-257  | +                     | +                 |
| Halwemer | F-45    | +                     | +                 |
| Hypomer  | FX-2050 | +                     | +                 |
|          | FX-3070 | +                     | +                 |
| Setalux  | 1198    | +                     | +                 |
|          | 1753    | +                     | +                 |
| Lumiflon | LF-100  | +                     | +                 |
|          | LF-200  | +                     | +                 |
|          | LF-400  | +                     | +                 |

+ ; Soluble, ~ ; Insoluble      + ; Transparent, ~ ; Hazy

Acrylic; DIC Co.,Ltd., Halwemer; DSM , Hypomer; Elementis  
Setalux; Allnex ,Lumiflon; Asahi Glass Co.,Ltd.

Mixing ratio of DURANATE™ 21S-75E with polyols is based on NCO/OH equivalent ratio of 1/1.

## Storage

DURANATE™ 21S-75E is sensitive to moisture and should therefore always be stored in sealed containers.

Characteristics of viscosity

Non-volatile content vs. Viscosity

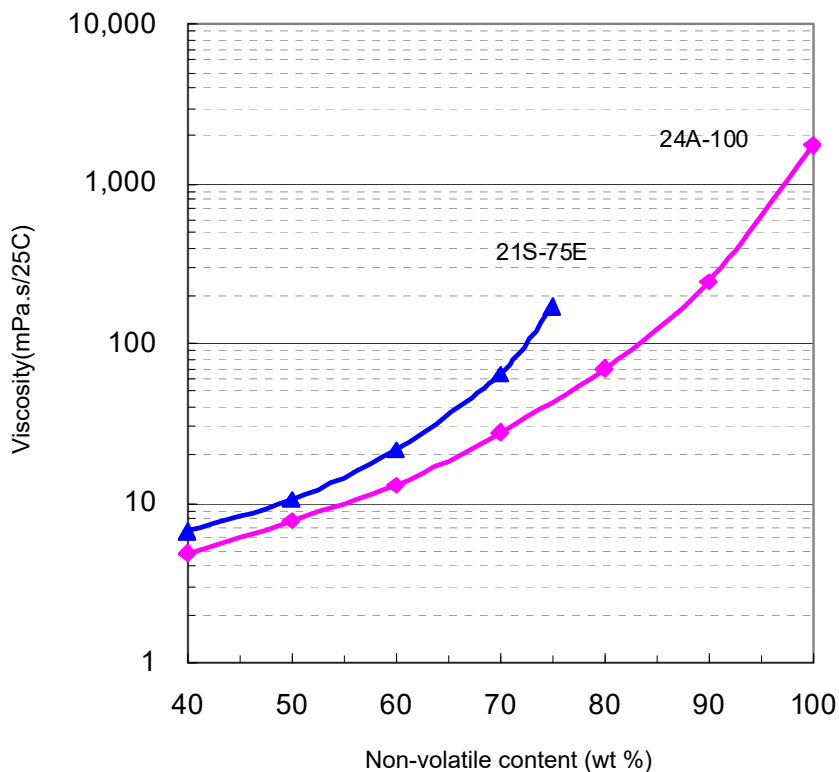


Fig-1. Dilution behavior of DURANATE™ 21S-75E

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