

# Chemische Beständigkeit

## Prüfung (in Anlehnung an DIN 53428):

Einwirkdauer des Mediums: 6 Wochen bei Raumtemperatur, jedoch für konzentrierte Säuren und Laugen sowie für Lösungsmittel: 7 Tage bei Raumtemperatur

## Beurteilungskriterium:

Veränderung von Reißfestigkeit und Reißdehnung (trockene Proben), Volumenänderung

## Beurteilungsmaßstab:

- 1... Ausgezeichnet beständig (Eigenschaftsänderungen <10%)
- 2... Gut beständig (Eigenschaftsänderungen zwischen 10% und 20%)
- 3... Bedingt beständig (Eigenschaftsänderungen teilweise über 20%)
- 4... Nicht beständig (Eigenschaftsänderungen alle über 20%)

|                                   | Sylomer® |           |   | Sonderprodukte und Kombinationswerkstoffe |             |             |
|-----------------------------------|----------|-----------|---|---|-------------|-------------|
|                                   | Sylodyn® | Sylodamp® |   | Sylomer® FR                               | Sylomer® EK | Sylomer® CT |
| <b>Wasser / wässrige Lösungen</b> |          |           |   |   |             |             |
| Wasser                            | 1        | 1         | 1 | 1   | 1           | 1           |
| Eisen-(III)-chlorid 10%           | 1        | 1         | 1 | 1   | 1           | 1           |
| Natriumcarbonat 10%               | 1        | 1         | 1 | 1   | 1           | 1           |
| Natriumchlorat 10%                | 1        | 1         | 1 | 1   | 1           | 1           |
| Natriumchlorid 10%                | 1        | 1         | 1 | 1   | 1           | 1           |
| Natriumnitrat 10%                 | 1        | 1         | 1 | 1   | 1           | 1           |
| Tenside (div.)                    | 1        | 1         | 1 | 1   | 1           | 1           |
| Wasserstoffperoxid 3%             | 1        | 1         | 1 | 1   | 1           | 1           |
| Betonmilch                        | 1        | 1         | 1 | 1   | 1           | 1           |

| <b>Säuren und Basen</b> |   |   |   |   |   |   |
|-------------------------|---|---|---|---|---|---|
| Ameisensäure 5%         | 3 | 3 | 3 | 2 | 3 | 3 |
| Essigsäure 5%           | 2 | 2 | 2 | 2 | 2 | 2 |
| Phosphorsäure 5%        | 1 | 1 | 1 | 1 | 1 | 1 |
| Salpetersäure 5%        | 4 | 4 | 4 | 4 | 4 | 4 |
| Salzsäure 5%            | 1 | 1 | 1 | 1 | 1 | 1 |
| Schwefelsäure 5%        | 1 | 1 | 1 | 2 | 1 | 1 |
| Ammoniaklösung 5%       | 1 | 1 | 1 | 2 | 1 | 1 |
| Kalilauge 5%            | 1 | 1 | 1 | 1 | 1 | 1 |
| Natronlauge 5%          | 1 | 1 | 1 | 2 | 1 | 1 |

| <b>Beständigkeit gegen andere Einflüsse</b> |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|
| Hydrolyse**                                 | 1   | 1   | 1   | 2   | 2-3 | 2-3 |
| Ozon  | 1   | 1   | 1   | 1   | 1   | 1   |
| UV-Strahlung und Bewitterung                | 1-2 | 1-2 | 1-2 | 1-2 | 1-2 | 1-2 |
| Biologische Beständigkeit                   | 1   | 1   | 1   | 1   | 1*  | 1*  |

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|----------------------|---------------------------------------|-----------|-----|---|-------------|-------------|
|                      | Sylodyn®                              | Sylodamp® |     | Sylomer® FR                               | Sylomer® EK | Sylomer® CT |
| <b>Öle und Fette</b> |                                       |           |     |   |             |             |
| ASTM Öl Nr. 1        | 1                                     | 1         | 1   | 1   | 1           | 1           |
| ASTM Öl Nr. 3        | 2                                     | 2         | 1   | 2   | 1           | 1           |
| Bohröl               | 2                                     | 2         | 2   | -   | 3           | 2-3         |
| Hydrauliköle         | abhängig von Zusammensetzung/Additive |           |     |   |             |             |
| Motoröl              | 1                                     | 1         | 1   | -   | 1           | 1           |
| Schalöl              | 1                                     | 1         | 1   | -   | 1           | 1-2         |
| Spurkranzschmiere    | 3                                     | 1-2       | 3   | 2   | 1-2         | 2           |
| Weichenschmiere      | 1-2                                   | 1-2       | 1-2 | 2   | 1-2         | 1-2         |

| <b>Lösungsmittel</b>           |   |     |   |     |     |     |
|--------------------------------|---|-----|---|-----|-----|-----|
| Aceton                         | 4 | 4   | 4 | 4   | 4   | 4   |
| Diesel/Heizöl                  | 2 | 2   | 2 | 3   | 2   | 2   |
| Vergaserkraftstoffe/Benzin     | 3 | 3   | 3 | 4   | 2-3 | 3   |
| Glycerin                       | 1 | 1   | 1 | 1   | 1   | 1   |
| Glykole                        | 2 | 1-2 | 2 | 3   | 2   | 2   |
| Reinigungsbenzine/Hexan        | 2 | 1   | 2 | 1-2 | 1   | 1   |
| Methanol                       | 4 | 3   | 4 | -   | 2   | 2-3 |
| aromatische Kohlenwasserstoffe | 4 | 4   | 4 | 4   | 4   | 4   |

\* Fungizid ausgerüstet  
\*\* 28 Tage, 70°C, 95% rel. Luftfeuchtigkeit

Alle Angaben und Daten beruhen auf unserem derzeitigen Wissensstand. Sie können als Rechen- bzw. Richtwerte herangezogen werden, unterliegen üblichen Fertigungstoleranzen und stellen keine zugesicherten Eigenschaften dar. Änderungen vorbehalten.

# Chemical Resistance

## Test conditions (drawing on DIN 53428):

Reaction time: 6 weeks at room temperature, except for concentrated acids, bases and solvents: 7 days at room temperature

## Evaluation criteria:

Changes in tensile strength and elongation at tear (dry samples), volume change

## Evaluation levels:

- 1... Excellent resistance (change in properties of <10%)
- 2... Good resistance (change in properties between 10% and 20%)
- 3... Moderate resistance (change in some properties of 20%)
- 4... Not resistance (change in all properties of more than 20%)

|                                  | Sylomer® | Syloodyl® | Sylostamp® | Special products and combination materials |             |             |
|----------------------------------|----------|-----------|------------|--|-------------|-------------|
|                                  |          |           |            | Sylomer® FR                                | Sylomer® EK | Sylomer® CT |
| <b>Water / aqueous solutions</b> |          |           |            |  |             |             |
| Water                            | 1        | 1         | 1          | 1  | 1           | 1           |
| Ferrous chloride 10%             | 1        | 1         | 1          | 1  | 1           | 1           |
| Sodium carbonate 10%             | 1        | 1         | 1          | 1  | 1           | 1           |
| Sodium chlorate 10%              | 1        | 1         | 1          | 1  | 1           | 1           |
| Sodium chloride 10%              | 1        | 1         | 1          | 1  | 1           | 1           |
| Sodium nitrate 10%               | 1        | 1         | 1          | 1  | 1           | 1           |
| Tensides (various)               | 1        | 1         | 1          | 1  | 1           | 1           |
| Hydrogen peroxide 3%             | 1        | 1         | 1          | 1  | 1           | 1           |
| Concrete slurry                  | 1        | 1         | 1          | 1  | 1           | 1           |

| <b>Acids and Bases</b> |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|
| Formic acid 5%         | 3 | 3 | 3 | 2 | 3 | 3 |
| Acetic acid 5%         | 2 | 2 | 2 | 2 | 2 | 2 |
| Phosphoric acid 5%     | 1 | 1 | 1 | 1 | 1 | 1 |
| Nitric acid 5%         | 4 | 4 | 4 | 4 | 4 | 4 |
| Hydrochloric acid 5%   | 1 | 1 | 1 | 1 | 1 | 1 |
| Sulfuric acid 5%       | 1 | 1 | 1 | 2 | 1 | 1 |
| Ammonia solution 5%    | 1 | 1 | 1 | 2 | 1 | 1 |
| Potassium lye 5%       | 1 | 1 | 1 | 1 | 1 | 1 |
| Soda lye 5%            | 1 | 1 | 1 | 2 | 1 | 1 |

| <b>Resistance to other factors</b> |     |     |     |     |     |     |
|------------------------------------|-----|-----|-----|-----|-----|-----|
| Hydrolysis**                       | 1   | 1   | 1   | 2   | 2-3 | 2-3 |
| Ozone                              | 1   | 1   | 1   | 1   | 1   | 1   |
| UV radiation and weather           | 1-2 | 1-2 | 1-2 | 1-2 | 1-2 | 1-2 |
| Biological stability               | 1   | 1   | 1   | 1   | 1*  | 1*  |

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|---------------------|------------------------------------|-----------|------------|--|-------------|-------------|
|                     |                                    |           |            | Sylomer® FR                                | Sylomer® EK | Sylomer® CT |
| <b>Oil and Fats</b> |                                    |           |            |  |             |             |
| ASTM Oil No. 1      | 1                                  | 1         | 1          | 1  | 1           | 1           |
| ASTM Oil No. 3      | 2                                  | 2         | 1          | 2  | 1           | 1           |
| Drilling oil        | 2                                  | 2         | 2          | -  | 3           | 2-3         |
| Hydraulic oils      | depending on composition/additives |           |            |  |             |             |
| Motor oil           | 1                                  | 1         | 1          | -  | 1           | 1           |
| Forming oil         | 1                                  | 1         | 1          | -  | 1           | 1-2         |
| Flange lubricant    | 3                                  | 1-2       | 3          | 2  | 1-2         | 2           |
| Point grease        | 1-2                                | 1-2       | 1-2        | 2  | 1-2         | 1-2         |

| <b>Solvents</b>        |   |     |   |     |     |     |
|------------------------|---|-----|---|-----|-----|-----|
| Acetone                | 4 | 4   | 4 | 4   | 4   | 4   |
| Diesel/heating oil     | 2 | 2   | 2 | 3   | 2   | 2   |
| Motor gasoline/petrole | 3 | 3   | 3 | 4   | 2-3 | 3   |
| Glycerin               | 1 | 1   | 1 | 1   | 1   | 1   |
| Glycols                | 2 | 1-2 | 2 | 3   | 2   | 2   |
| Cleaning benzine/hexan | 2 | 1   | 2 | 1-2 | 1   | 1   |
| Methanol               | 4 | 3   | 4 | -   | 2   | 2-3 |
| Aromatic hydrocarbons  | 4 | 4   | 4 | 4   | 4   | 4   |

\* fungicide equipped  
\*\* 28 days, 70 °C, 95% relative humidity

All information and data is based on our current knowledge. The data can be applied for calculations and as guidelines, are subject to typical manufacturing tolerances, and are not guaranteed. We reserve the right to amend the data.