

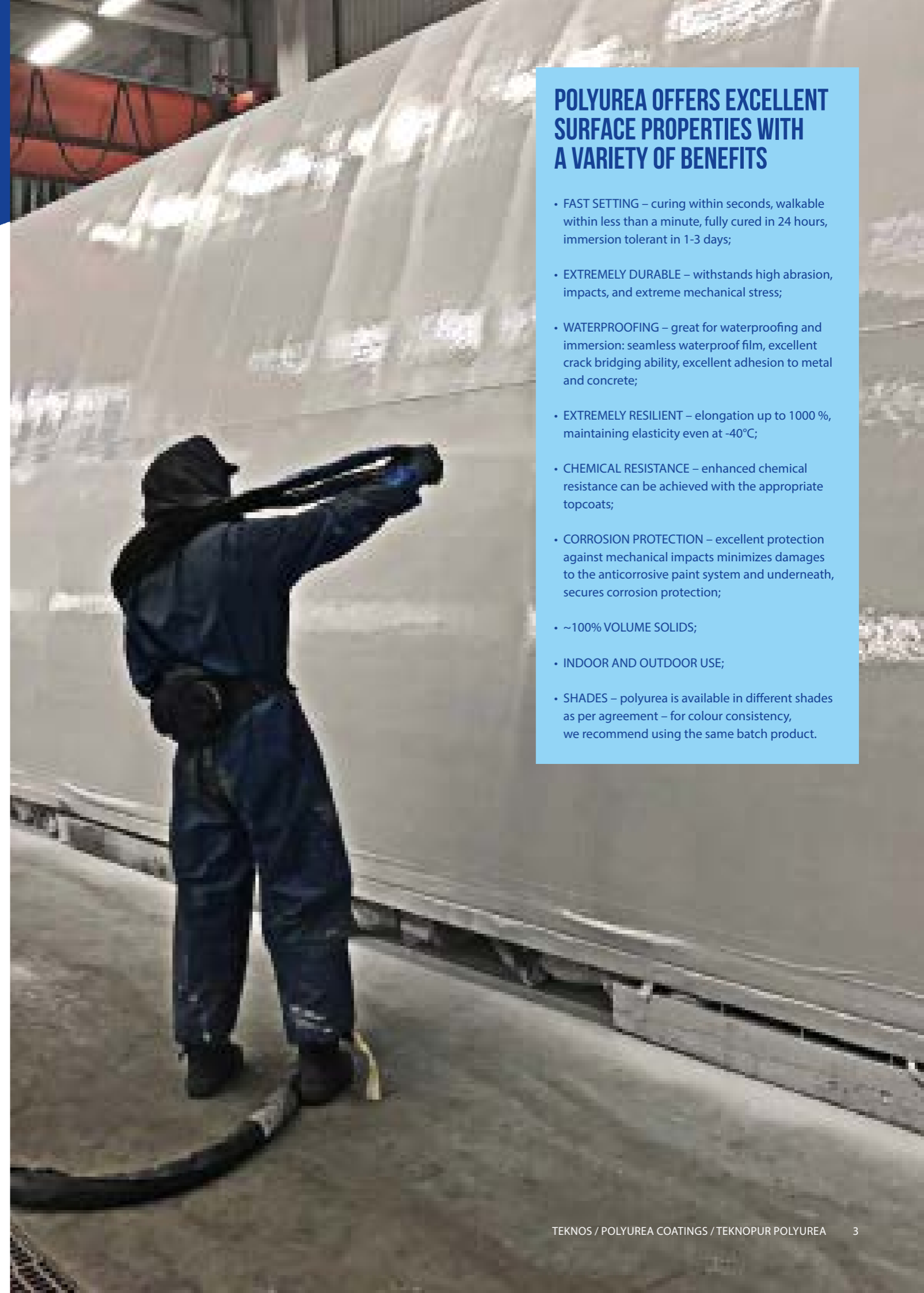
TEKNOPUR POLYUREA COATINGS

**EXTREMELY
RESISTANT
ELASTOMERIC
COATINGS THAT
CURE IN SECONDS**



**POLYUREA OFFERS EXCELLENT
SURFACE PROPERTIES WITH
A VARIETY OF BENEFITS**

- **FAST SETTING** – curing within seconds, walkable within less than a minute, fully cured in 24 hours, immersion tolerant in 1-3 days;
- **EXTREMELY DURABLE** – withstands high abrasion, impacts, and extreme mechanical stress;
- **WATERPROOFING** – great for waterproofing and immersion: seamless waterproof film, excellent crack bridging ability, excellent adhesion to metal and concrete;
- **EXTREMELY RESILIENT** – elongation up to 1000 %, maintaining elasticity even at -40°C;
- **CHEMICAL RESISTANCE** – enhanced chemical resistance can be achieved with the appropriate topcoats;
- **CORROSION PROTECTION** – excellent protection against mechanical impacts minimizes damages to the anticorrosive paint system and underneath, secures corrosion protection;
- **~100% VOLUME SOLIDS;**
- **INDOOR AND OUTDOOR USE;**
- **SHADES** – polyurea is available in different shades as per agreement – for colour consistency, we recommend using the same batch product.



**TEKNOPUR
POLYUREA COATINGS**



Teknos is a member of the PDA Europe.

TEKNOPUR polyurea products offer ultimate protection to versatile coating needs.

With Teknos as your polyurea supplier, you receive:

- Complete polyurea system from primers and sealers to topcoats
- Local technical service, support and training
- Partner with comprehensive corrosion protection knowledge gained through 70 years

We can support you with any questions: selecting the right polyurea system for your application, safety, equipment, troubleshooting, and maintenance.

Our technical service professionals have vast experience in industrial painting and they are happy to help you with polyurea and its special requirements.

We provide a full range of services to help our customers with polyurea, from product, chemistry, and application training and professional technical support.

OUR CUSTOMER PROMISES



POLYUREA COATING SYSTEMS: SUITABLE FOR MANY SUBSTRATES AND OBJECTS IN MULTIPLE INDUSTRIES

Explore this brochure section further for information about our polyurea coating systems and their areas of application.

Polyurea can be used to protect many kinds of surfaces and complex structures. Substrates such as concrete, steel, bitumen, wood, wood composites, glass fibre composites, PVC, foam materials, and geotextiles can be protected with polyurea.

Teknos has developed comprehensive polyurea coating systems for different needs according to application area, environments, substrate, stress circumstances, and needed tolerance. For selected roof and concrete applications, we offer both pure polyurea and modified polyurea coating systems.

FOR ADVICE ON THE FULL POLYUREA SYSTEM
BEST SUITED TO YOUR PROJECT,
CONTACT OUR SALES TEAM



teknos.com/contactus

ROOFS

BITUMINOUS,
METAL SHEETING,
TILE (E.G. CLAY, CONCRETE)

WHY CHOOSE POLYUREA

- Seamless waterproofing, also for green roof structures
- Extended service life with durability
- Reflecting heat with light colours
- Fire safety – no hot work
- No lifting of heavy bitumen rolls or mass removing old bitumen
- Easier to spray on complex shapes e.g. throughlets

| Application | System type | Feature | Note | Full system description |
|-------------------------|---------------------------------------|----------------------------|---|---|
| NEW ROOFS & MAINTENANCE | Modified polyurea TEKNOPUR 400-800 | Durable, Cost-effective | Where colour fastness e.g. non-fading, and UV resistance is required, non-fading topcoats can be applied. | Contact our sales to have the complete coating system with correct sealer/primer and topcoat. |
| MAINTENANCE | Pure polyurea TEKNOPUR 320-800 | Extremely durable | | |

CONCRETE STRUCTURES

FLOORS

WHY CHOOSE POLYUREA

- Surface strength increases, prevents wearing and tear
- Chemical resistance
- Waterproofing
- Higher point load durability
- Excellent crack bridging ability
- Prevents the absorption of dirt and oils
- Slip resistance
- Improved appearance

| Application | System type | Feature | Full system description |
|---|---------------------------------------|----------------------------|---|
| HEAVY TRAFFIC E.g. in Industrial use | Pure polyurea TEKNOPUR 300-800 | Extremely durable | Contact our sales to have the complete coating system with correct sealer/primer and topcoat. |
| LIGHT TRAFFIC E.g. Business premises | Pure polyurea TEKNOPUR 300-800 | Extremely durable | |
| | Modified polyurea TEKNOPUR 400-800 | Durable, Cost-effective | |

CONCRETE STRUCTURES

Coating systems for mechanical protection and waterproofing of various concrete structures.

E.G. WALLS, YARD DECKS, PARKING LOTS

WHY CHOOSE POLYUREA

- Waterproofing
- Extended service life with durability
- Colour options for creating colour-coded parking lots

| Application | System type | Feature | Full system description |
|--|---------------------------------------|----------------------------|---|
| UV-PROTECTED: CONCRETE STRUCTURES PROTECTED FROM UV-RADIATION E.g. Waterproofing yard decks, interiors of parking lots | Pure polyurea TEKNOPUR 300-800 | Extremely durable | Contact our sales to have the complete coating system with correct sealer/primer and topcoat. |
| | Modified polyurea TEKNOPUR 400-800 | Durable, Cost-effective | |
| UV-EXPOSED: CONCRETE STRUCTURES UNDER UV-RADIATION E.g. Walls and socles | Pure polyurea TEKNOPUR 300-800 | Extremely durable | Further information on the surface preparation requirements is available in the product data sheet. For details, please ask your Teknos representative. |
| | Modified polyurea TEKNOPUR 400-800 | Durable, Cost-effective | |

BRIDGES

WHY CHOOSE POLYUREA

- Less traffic interruption during renovation
- Extended service life
- Complete coating system
- SILKO approved coating system*

| Application | Full system description |
|---|--|
| WATERPROOFING Seamless waterproofing beneath asphalt. | *SILKO approved system = Approved according to standardized SILKO bridge repair directives issued by The Finnish Transport Agency. Details of the applicable systems and approvals are available from your Teknos representative. |

STEEL STRUCTURES

The systems are divided into three categories according to the level of mechanical stress.

WHY CHOOSE POLYUREA

- Excellent abrasion resistance
- Impact protection for anticorrosive paint underneath
- Chemical resistance
- Fast coating procedure, quick turnaround
- Friction modification
- Sound dampening – noise reduction

| Application | System type | Full system description |
|---|-----------------------------------|--|
| HARD MECHANICAL STRESS E.g. ramps, spillway gates in hydropower stations, boat landings in offshore turbine foundations | Pure polyurea TEKNOPUR 300-800 | Contact our sales to have the complete coating system with correct sealer/primer and topcoat. Further information on the surface preparation requirements is available in the product data sheet. For details, please ask your Teknos representative. |
| MEDIUM MECHANICAL STRESS E.g. truck beds | Pure polyurea TEKNOPUR 300-800 | |
| LIGHT MECHANICAL STRESS E.g. gangways, stairs, pillars | Pure polyurea TEKNOPUR 300-800 | |

INDUSTRIAL TANKS AND BUNDS

Coating systems are based on immersion types and exposures.
STEEL, CONCRETE

WHY CHOOSE POLYUREA

- Chemical resistance
- Excellent abrasion resistance
- Impact protection for anticorrosive paint underneath
- Fast coating procedure, quick turnaround
- Friction modification

| Application | System type | Full system description |
|--|---|---|
| TANKS, CHEMICALS; CONTINUOUS IMMERSION | Pure polyurea TEKNOPUR 300-800 Chemical Exposure System – for details on applicable chemicals, please ask your Teknos representative. | Contact our sales to have the complete coating system with correct sealer/primer and topcoat. |
| TANKS, WATER; CONTINUOUS IMMERSION | Pure polyurea TEKNOPUR 300-800 System suitable for water immersion – max. 90°C (clean water). | |
| BUND LININGS, OCCASIONAL, SHORT TERM EXPOSURE TO INDUSTRIAL CHEMICALS | Pure polyurea TEKNOPUR 300-800 For details on applicable chemicals, please ask your Teknos representative. | |

STEEL IN SPLASH ZONE & OFFSHORE APPLICATIONS

E.G. BOAT LANDINGS IN OFFSHORE WIND TURBINE FOUNDATIONS, SPILLWAY GATES IN HYDROPOWER STATIONS

WHY CHOOSE POLYUREA

- Extended service life with durability
- Impact protection for anticorrosive paint underneath
- Available according to colour requirements

| Application | Note | Full system description |
|---|---|--|
| PROTECTION AGAINST MECHANICAL IMPACTS Minimizing damages to the anticorrosive paint system on the foundation. | Polyurea can be matched to the colour requirements. | Details of the applicable systems and approvals are available from your Teknos representative. |

OTHER AREAS

Polyurea helps to protect a variety of objects. Polyurea is also widely used in areas such as: polystyrene sculptures and decorative elements, swimming pools, truck beds, heavy machinery, transportation vehicles, wood structures. If you are interested in how polyurea could be used in your project, please consult our polyurea professionals.

WHY CHOOSE POLYUREA

- Weather, moisture & elements protection
- Structure strengthening & extended service life
- Enabling innovative design



ARCLIGHT AB's polystyrene sculptures and decorative elements are protected with TEKNOPUR 300 to make ordinary polystyrene ultra-strong and extremely weather-resistant, which makes it possible to use this light material in creation of impressive props.



Modvion's innovative wooden turbine towers' glulam modules are coated with polyurea for various advantages: it improves mechanical protection, and most importantly for this object, it brings waterproofing and weather resistance.

CHECKLIST FOR SELECTING A SUITABLE POLYUREA SYSTEM

Teknos technical service professionals help you to find the most suitable coating system for your project. Checklist for factors to consider when discussing the options:

- ✓ REQUIRED APPROVALS OR CERTIFICATIONS
- ✓ EXPOSURE:
 - Chemical stress
 - Mechanical stress
 - Immersion
 - Temperature
 - UV-radiation exposure
- ✓ SUBSTRATE TYPE
- ✓ CONDITIONS WHEN SPRAYING E.G. TEMPERATURE, HUMIDITY, SURROUNDINGS
- ✓ PROJECT SCHEDULE FACTORS
- ✓ REQUIRED PROPERTIES:
 - Waterproofing
 - Moisture and weather protection
 - Mechanical protection
 - Higher surface friction
 - Sound dampening – noise reduction
 - Impact protection for the anticorrosive paint system underneath
 - Elasticity and ability to and maintaining it even at -40°C
 - Crack bridging ability
 - Abrasion resistance

SEND US A QUESTION



tekno.com/contactus

WHEN COATING WITH POLYUREA

- There are two rapidly reacting and curing components that need the right conditions in order to achieve the desired outcome.
- Special two-component spraying equipment required.
- Typically hot-sprayed at 70-85°C.
- Due to the curing time of a few seconds, there is no room for errors.
- Personal protective equipment necessary.

HIGHLY-SKILLED PROFESSIONAL CONTRACTORS ARE REQUIRED FOR SUCCESSFUL PROJECTS

TEKNOS POLYUREA TRAINING



We train all our new polyurea customers to excel in all aspects of polyurea usage, including product chemistry, theory, and practical issues such as equipment, safety, spraying technique, and troubleshooting.

In addition to local polyurea training, we often participate in the first sprayings at the customer site to successful start and smooth first deployment of polyurea coating.

CURRENT INFORMATION ABOUT TRAININGS



tekno.com/polyureatraining



WIDE POLYUREA PRODUCT RANGE

Teknos has a wide range of polyurea options to suit your needs:

TEKNOPUR 300 PURE POLYUREA

- CE-marked for coating of concrete (EN 1504-2).
- Fire classification: EN 13501-1: E_{fl}
- Recommended for surfaces which require abrasion resistance and/or chemical tolerance.

TEKNOPUR 320 PURE POLYUREA

- CE-marked for coating of concrete (EN 1504-2).
- Recommended for coating and waterproofing roofs.
- Great for concrete structures and floors for heavy traffic.

TEKNOPUR 360 PURE POLYUREA LONGER CURING TIME

- Recommended for coating floors that are not exposed to chemicals.
- Recommended for floors that require longer gel time because of better levelling and appearance.

TEKNOPUR 400 MODIFIED POLYUREA

- CE-marked for coating of concrete (EN 1504-2).
- Recommended for coating and waterproofing roofs and concrete structures.
- Cost-effective option for environment with lighter mechanical stress, for example floor surfaces with no heavy traffic.

TEKNOPUR 340 FIRE-RETARDANT POLYUREA

- Fire classification: CEN TS 1187: B_{ROOF} T2 EN 13501-1: C_{fl}-s1.
- CE-marked for coating of concrete (EN 1504-2).
- Used for waterproofing and improving physical resistance for roofs and concrete structures on objects which require a fire resistance rated coating.

TEKNOPUR SEALER 200

- Used as a primer in elastomeric coating systems.

TEKNOPUR HARDENER -SERIES

- Used as hardeners for TEKNOPUR products.

TEKNODUR TOP COATS

- Selected TEKNODUR top coats for enhanced UV resistance.

FIND TECHNICAL DATA SHEETS
AND SAFETY DATA SHEETS:



tekno.com/polyurea

TECHNICAL FEATURES OF POLYUREA

COMPARISON OF TECHNICAL FEATURES IN DIFFERENT VERSIONS

| Property | Standard | Unit | TEKNOPUR 300-800 | TEKNOPUR 320-800 | TEKNOPUR 340 FR | TEKNOPUR 360-800 | TEKNOPUR 400-800 |
|-------------------------------------|-----------------|----------|------------------|------------------|-----------------|------------------|------------------|
| Gel time | | s | 5 | 10-15 | 5 | 30-45 | 10-15 |
| Hardness (24h, Shore A/D) | ISO 868 | | 98/52 | 90/40 | 98/60 | 97/51 | 91/35 |
| Tensile strength | ISO 527-2 | MPa | 20 | 17 | 14 | 12 | 15 |
| Elongation | ISO 527-2 | % | 380 | 420 | 300 | 410 | 400 |
| Nominal Elongation | ISO 527-2 | % | 600 | 800 | 350 | 650 | 500 |
| Tear strength | ISO 34-1:2015 C | N/mm | 65 | 55 | 75 | 50 | 30 |
| Impact resistance, RT | ISO 6272-2 | kg*cm | >200 | | >200 | >200 | >200 |
| Impact resistance, -20°C | ISO 6272-2 | kg*cm | >200 | >200 | | >200 | >200 |
| Taber abrasion, H22, 1000 g, 1000 r | ISO 7784-2 | mg | 40 | 28 | 30 | 71 | 25 |
| Water vapor permeability | ISO 7783 | g/m2/day | 11 | 22 | 6 | 11 | 12 |
| Water absorption | 65°C / 10 d | % | 2 | 6 | | 7 | 6 |

TEKNOPUR 300—800: EXCELLENT CHEMICAL RESISTANCE

| Chemical resistance @ +23°C if not otherwise noted | Standard | Minimum durability without major changes |
|--|------------|--|
| Distilled water | ISO 2812-1 | 3+ years |
| Sea water | ISO 2812-1 | 3+ years |
| NaOH 50% | ISO 2812-1 | 2+ year |
| Ammonia 20% | ISO 2812-1 | 2+ year |
| Sulphuric acid 20% | ISO 2812-1 | 2+ year |
| Acetic acid 10% | ISO 2812-1 | 1+ year |
| Hydrochloric acid HCl 10% | ISO 2812-1 | 2+ year |

WE MAKE THE WORLD LAST LONGER

Teknos is a global coatings company with operations in more than 20 countries in Europe, Asia, and the USA. Teknos is one of the leading suppliers of industrial coatings with a strong position in retail and architectural coatings.

Teknos wants to make the world last longer by providing smart, technically advanced paint and coating solutions to protect and prolong. Teknos always works in close cooperation with its customers. Teknos was established in 1948 and is one of Finland's largest family-owned businesses.
For further information, visit www.teknos.com.



WATCH OUR POLYUREA VIDEOS:



youtube.com/teknopurpolyurea

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