



LIQUID-APPLIED POLYURETHANE WATERPROOFING MEMBRANE



POLY TI

POLY TI 160

PRODUCT DESCRIPTION

POLY TI 160 is a premium, liquid-applied, highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing. POLY TI 160 is based on pure elastomeric hydrophobic polyurethane resins, which result in excellent mechanical, chemical, thermal and natural element resistance properties. Cures by reaction with ground and air moisture.

USES

- Waterproofing of Roofs
- Waterproofing of Balconies, Terraces and Verandas
- Waterproofing of Wet Areas (under-tile) in Bathrooms, Kitchens, Balconies, Auxiliary Rooms, etc
- Waterproofing of Pedestrian traffic Decks
- Waterproofing of old Bitumen felts, Asphalt felts, EPDM and PVC membranes and old Acrylic coatings.
- Protection of Polyurethane Foam Insulation
- Waterproofing and protection of Concrete constructions like Bridge-Decks, Tunnels, Stadium Stands, etc.

CONSUMPTION

1,2 – 2 kg/m² applied in two or three layers. This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

Requires covering with suitable top-coat when applied in exposed surfaces.

PACKAGING

POLY TI 160 is supplied in 25 kg, 15 kg, 6 kg, 1kg metal pails and 250 kg Barrels. Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5^o-30^oC. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

ADVANTAGES

- Simple application (roller or airless spray).
- When applied forms seamless membrane without joints.
- Resistant to water and
- Resistant to frost.
- Crack-bridging.
- Provides water vapor permeability, so the surface can breathe.
- Provides excellent thermal resistance, it never turns soft.
- Provides excellent weather resistance.
- Waterproofs old bitumen-, asphalt felts by covering them, without the need to remove them prior to application.
- Maintains its mechanical properties over a temperature span of -30°C to +90°C.
- Provides excellent adhesion to almost any type of surface.
- The waterproofed surface can be used for domestic and public pedestrian traffic.
- Resistant to detergents, oils, seawater and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes.
- Does not need the use of open flames (torch) during application.
- Over 15 years of positive feedback worldwide.

COLORS

Supplied in off-white and light grey. Other colors may be supplied on demand.

SAFETY MEASURES

POLY TI 160 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet.
PROFESSIONAL USE ONLY.

TECHNICAL DATA

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	> 600 %	ASTM D 412 / DIN 52455
Tensile Strength	> 4 N/ mm ²	ASTM D 412 / DIN 52455
Water Vapor Permeability	> 40 gr/m ² /day	ISO 9932:91
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2,0 N/mm ² (concrete surface failure)	ASTM D 903
Crack Bridging Capability	up to 2 mm crack	EOTA TR-008
Hardness (Shore A Scale)	65	ASTM D 2240 (15")
Resistance to Root Penetration	Resistant	UNE 53420
Thermal Resistance (80°C for 100 days)	Passed – No significant changes	EOTA TR-011
UV accelerated ageing, in the presence of moisture	Passed – Slight surface chalking	EOTA TR-010
Resistance after water aging	Passed	EOTA TR-012
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change	Inhouse Lab
Service Temperature	-30°C to +90°C	Inhouse Lab
Shock Temperature (20min)	200°C	Inhouse Lab
Rain Stability Time	4 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	12 hours	
Final Curing time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

APPLICATION

Surface Preparation

Careful surface preparation is essential for optimum finish and durability.

The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed. Do not wash surface with water!

Repair of cracks and joints:

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.

- Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with the POLY PRIME QUICK Primer and allow 2-3 hours to dry. Fill all prepared cracks with POLY JOINT 30 sealant. Then apply a layer of POLY TI 160, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of the POLY TI FABRIC. Press it to soak. Then saturate the POLY TI FABRIC with enough POLY TI 160, until it is fully covered. Allow 12 hours to cure.
- Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width:depth ratio of the movement joint should be at a rate of approx. 2:1.

Apply some POLY JOINT 30 Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of POLY TI 160, 200mm wide centered over and inside the joint. Place the POLY TI FABRIC over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough POLY TI 160. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with POLY JOINT 30 sealant. Do not cover. Allow 12-18 hours to cure.

Priming

Prime very absorbent surfaces like concrete, cement screed or wood with POLY PRIME QUICK or with UNI-VERSAL EPOXY PRIMER. Prime surfaces like bitumen-, asphaltfelts with a Polyurethane Primer or with UNI-VERSAL EPOXY PRIMER. Prime non-absorbent surfaces like metal, ceramic tiles and old coatings with UNI-VERSAL EPOXY PRIMER. Allow the primer to cure according its technical instruction.

APPLICATION

Waterproofing membrane

Stir well before using. Poor the POLY TI 160 onto the primed surface and lay it out by roller or brush, until all surface is covered. You can use airless spray allowing a considerable saving of manpower.

After 12-18 hours (not later than 48 hours) apply another layer of the POLY TI 160.

For demanding applications, apply a third layer of the POLY TI 160.

Reinforce always with the POLY TI Fabric at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet POLY TI 160 a correct cut piece of POLY TI Fabric, press it to soak, and saturate again with enough POLY TI 160. For detailed application instructions with the POLY TI Fabric, contact our R+D department.

RECOMMENDATION: At concealed surfaces or on highly cracked surfaces, we recommend reinforcement of the entire surface, with the POLY TI Fabric. Use 5-10cm stripe overlapping.

ATTENTION: Do not apply the POLY TI 160 over 0.6 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.instruction.

Finishing

If the POLY TI 160 is applied on exposed surfaces, apply one or two layers of the color stable and totally UV stable POLY TI TC-40 Top-Coat over the POLY TI 160.

If a heavy duty, abrasion resistant surface is desired (e.g. Public Pedestrian Deck, etc), apply two layers of the POLY TI TC-42 Top-Coat. For the several Top-Coats application procedures, please consult their technical instructions.

WARNING: The POLY TI system is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface. Please contact our R+D Dept. for more details.

LOCATIONS

KIGDOM OF SAUDI ARABIA

unitech.ksa@ikkgroup.com

Jeddah

Tel : +966 12 627 8222
Fax: +966 12 627 8722

Jeddah - Ghurab Showroom

Tel : +966 12 667 2000
Fax: +966 12 661 4306

Mak kah/Taif

Tel : +966 12 541 1206
Fax: +966 12 532 1675

Mad inah

Tel : +966 14 842 1095
Fax: +966 14 842 1090

Yanbu

Tel : +966 14 390 1499
Fax: +966 14 322 7101

Khamis Mushayt

Tel : +966 17 237 5929
Fax: +966 17 237 8783

Najran

Tel : +966 17 546 3873
Fax : +966 17 546 3873

Al Baha

Tel : +966 17 237 5929
Fax: +966 17 237 8783

Sharorah

Tel : +966 17 532 8153
Fax: +966 17 532 8153

Gizan

Tel : +966 17 321 6660
Fax: +966 17 321 0665

Riyadh North

Tel : +966 11 415 5465
Fax: +966 11 456 6627

Riyadh South

Tel : +966 11 448 0112
Fax: +966 11 447 7421

Riyadh West

Tel : +966 11 431 6271
Fax: +966 11 431 7642

Riyadh East

Tel : +966 11 448 0112
Fax: +966 11 447 7421

Qassim / Buraidah

Tel : +966 16 382 3946
Fax: +966 16 385 2186

Hail

Tel : +966 16 543 3931
Fax: +966 16 543 3935

Skakah / Qurayyat

Tel : +966 14 626 3904
Fax: +966 14 626 3905

Tabuk

Tel : +966 14 423 5203
Fax: +966 14 423 5203

Hafr el Batin

Tel : +966 13 729 3644
Fax: +966 13 729 3644

Dammam

Tel : +966 13 859 0097
Fax: +966 13 857 8177

Jubail

Tel : +966 13 361 4390
Fax: +966 13 362 4499

Hofuf

Tel : +966 13 530 1474
Fax: +966 13 530 7144

FACTORIES

SFSP - KSA

sfsp.jeddah@ikkgroup.com

Specialized Factory for Steel Products
3rd Industrial City / Jeddah

Tel: +966 12 637 4482
Fax: +966 12 636 1963

SFSP / UAE

sfsp.uae@ikkgroup.com

SIGMA Factory for Steel Products
DIC (Dubai Industrial City)

Tel : +971 4 818 1919

SFSP / Egypt

sfsp.cairo@ikkgroup.com

Specialized Factory for Steel Products
6th of October City Giza

Tel : +20 2 3820 6477
Fax: +20 2 3820 6036

SFSP / Lebanon

sfsp.lebanon@ikkgroup.com

Specialized Factory for Steel Products
Tanayel, Bekaa

Tel: +961 8 514 290
Fax: +961 8 514 291

BAHRAIN

unitech.bahrain@ikkgroup.com

Manama

Tel : +973 17 874 897
Fax: +973 17 789 470

KUWAIT

unitech.kuwait@ikkgroup.com

Kuwait City

Tel : +965 2 4924 937
Fax: +965 2 4924 938

UNITED ARAB EMIRATES

unitech.uae@ikkgroup.com

Dubai - Al Rashidiyah

Tel : +971 4 2591 773
Fax : +971 4 2591 774

Abu Dhabi - Musaffah

Tel: +971 2 552 3393
Fax: +971 2 552 5499

OMAN

unitech.oman@ikkgroup.com

Muscat

Tel : +968 24 591 006
Fax : +968 24 597 006

JORDAN

unitech.jordan@ikkgroup.com

Amman

Tel : +962 6 556 3030
Fax: +962 6 554 7911

Aqaba

Tel : +962 6 556 3030
Fax: +962 6 554 7911

PAKISTAN

unitech.pakistan@ikkgroup.com

Karachi - Clifton

Tel-Fax : +92 21 35826120

EGYPT

unitech.egypt@ikkgroup.com

Cairo 6th of October City

Tel : +20 2 3820 6477
Fax: +20 2 3820 6036

LEBANON

unitech.lebanon@ikkgroup.com

Beirut

Tel : +961 1 858 277
Fax: +961 1 858 276

ENGINEERING, DESIGN, MARKETING & MULTIMEDIA

Unitech Deutschland GmbH
Germany

unitech.germany@ikkgroup.com

Stuttgart

Tel : +49 711 6868 7222
Fax: +49 711 6868 7223

Multi-D s.a.r.l

Lebanon
multi-d@ikkgroup.com

Multi-d Beirut

Tel : +961 1 841 155
Fax: +961 1 841 156

R&D DEPARTMENT

Saih Suhaib-3, Opp DEWA Substation, Dubai Industrial City, Dubai, UAE

Tel : +971 4 818 1944 - Mob: +971 55 517 0841

Email: unitech.uae@ikkgroup.com - abed.demachkieh@ikkgroup.com