

STACOME-U1-COLDFLEX-T

**1-c poly-urea cycloaliphatic coating-membrane:
cold applied, transparent, liquid proof, impact resistant & ultra-elastic**

Description

STACOME-U1-COLDFLEX-T is the cycloaliphatic **COating-MEMbrane, COLD** (ambient temperature) **applied, extremely FLEXible and Transparent, for the durable protection and embellishment of constructions** (concrete, wood, stone, ceramic bricks & tiles, ...), **especially for roofs, terraces, balconies and overhangs. It combines high abrasion and impact resistance, outstanding shock and sound damping, strong adhesion, long term transparency, water- and air-proofing with ultra-high flexibility and elasticity (± 200 %).**

STACOME-U1-COLDFLEX-T is standard transparent, with a glossy finish.

STACOME-U1-COLDFLEX-T is a 1-c system, based on specific cycloaliphatic poly-isocyanates, which react fast to pure poly-urea (see The story of **U**).

STACOME-U1-COLDFLEX-T is standard applied in 1-2 layers (0,5–1 mm total). It's touch-dry after ± 6 hours, light service after ± 1,5 days and full service after ± 1 week.

STACOME-U1-COLDFLEX-T is combined with **STACPRIMER-SITi1-T**.

STACPRIMER-SITi1-T	1-c Siloxane Titanium primer
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Its advantages are

1. Pure cycloaliphatic poly-urea, 1-component

- Superb UV resistance: durable transparency, without yellowing
- Glossy finish, bubble-free, without blistering or chipping
- Very high solids content, very low solvent
- Excellent chemical resistance: pH 5–8
- Peak temperature: – 20 to + 80°C
- Ultra-high durable flexibility and elasticity: ± 200 %
- High abrasion and impact resistance
- Resists thermal shocks
- Shock and sound damping
- Seamless (no joints) and liquid proof
- Crack bridging, permits even light cracking of the substrate after installation
- Strong adhesion to most (well prepared) substrates: concrete, wood, natural stone, ceramic bricks & tiles, ...

⇒ **LONG LIFE TIME**

2. Easy and quick application

- Application temperature 5–35°C, air humidity ≤ 85 %, substrate humidity < 5 %
- Application with roll and brush (optional airless spray)
- Low viscosity: no thinner needed

- 1-c (1 component): no additives, no mixing errors, no induction time, no potlife
- Horizontal, sloped and vertical application
- Theoretical consumption 1 mm DFT: ± 1,4 kg/m²
- DFT (dry film thickness):
 - ✓ Horizontal: ≤ 1 mm/layer
 - ✓ Vertical: ≤ 0,25 mm/layer

⇒ **FAST CAREFREE INSTALLATION**

3. Rapid (re)utilisation

- **STACPRIMER-SITi1-T** + 1-2 layers: installed in 1 day
- Very fast curing: tack-free ± 6 hours, light service ± 1,5 days, full service ± 1 week

⇒ **MINIMAL STOP**

4. Hygienic and secure

- Inert, easy cleaning, dust-free, very low fouling
- Seamless (no joints) and liquid proof
- Shock and sound damping
- Environmental compatible:
 - ✓ Solids > 80 %w
 - ✓ VOC < 20 %w

⇒ **THE TRANSPARENT PROTECTION OF INFRASTRUCTURE**

Application fields

STACOME-U1-COLDFLEX-T protects, waterproofs and embellishes constructions (concrete, wood, natural stone, ceramic bricks & tiles, ...) in many domains:

- Roofs
- Terraces
- Balconies
- Overhangs
- Walls
- ...

See **STACOME-U1-COLDFLEX-T**; *Examples.*

Properties liquid STACOME-U1-COLDFLEX-T *

Density	± 1,05 kg/dm ³ ± 5 %
Viscosity (20°C)	± 1.500 mPa.s ± 10 %
Solids content and VOC	Weight Volume VOC > 80 % 77 % < 210 g/dm ³
DFT (dry) (1-2 layers)	± 0,5 to 1,0 mm
DFT %	± 77 %
WFT (wet) (1-2 layers)	± 0,7 to 1,4 mm
Coverage (per mm DFT)	
Theoretical	± 1,4 kg/m ² (1,3 L/m ²)
Practical (vb. +10 %)	± 1,5 kg/m ² (1,4 L/m ²)
Standard colour	Transparent

Properties cured STACOME-U1-COLDFLEX-T *

Density	± 1,1	kg/dm ³	± 5 %
Peak temperature	- 20	to	80 °C
Thermal stability (100 days at 80°C)	Excellent		
Adhesion to concrete	Excellent	> 2	MPa
Tensile strength	Excellent	± 20	MPa
Tear strength	Excellent	± 85	kN/m
Elongation at break	Extreme	± 200	%
Hardness: Shore D	Excellent	± 29	
Shore A		± 80	
Watertightness	Watertight		
QUV resistance to weather (4 hours UV at 60°C (UVB lamp) and 4 hours at 50°C)	Excellent	(3000 h)	
Fire resistance	Euroclass F		
Colour finish	± Glossy		
Standard colour	Transparent		

*: under standard conditions (test methods on request)

Chemical resistance

STACOME-U1-COLDFLEX-T has excellent weather resistance and modest chemical resistance. e.g.:

- ✓ Outdoors atmosphere: excellent
- ✓ Soft water: excellent (≤ 80°C)
- ✓ Sea water: excellent
- ✓ Acids: ≥ pH 5
- ✓ Bases: ≤ pH 8
- ✓ Potassium hydroxide 8 %, 10 days at 50°C
- ✓ Sodium hypochlorite (≈ bleach) 5 %, 10 days.

Not recommended for applications in pools, zones with chemically treated water and/or total immersion.

Once the membrane is formed, do not clean with highly corrosive products (e.g. bleach > 5 % sodium hypochlorite).

Surface preparation

Non-porous substrates (incl. natural stone, ceramic bricks & tiles)

Clean the surface as necessary with steam, water and/or solvent (e.g. STACLEAN-M or STACLEAN-ECO) by a rag, to remove all contaminants (e.g. oil, grease, lubricants, mud, acids).

Vacuum clean to dust-free and dry.

Check joints, repaired or irregular parts, ... and where necessary pre-treat, seal (e.g. STACSEAL-U1, STACTAPE-S) and/or stripe prime them.

If needed, vacuum clean again and ensure that the substrate, is dry, also under the bricks and tiles (≤ 5 % moisture, no condensate and/or ice crystals).

Apply immediately STACPRIMER-SiTi1-T.

Concrete (porous substrates)

The concrete substrate quality must be in line with the minimum specifications (e.g. moisture < 5 %, compression strength > 25 MPa, tensile strength > 1,5 MPa). Allow new concrete to cure ≥ 4 weeks.

Clean the surface as necessary with steam, water and/or solvent (e.g. STACLEAN-M or STACLEAN-ECO) by a rag, to remove all contaminants (e.g. oil, grease, lubricants, mud, acids).

Vacuum clean to dust-free and dry.

Check joints, repaired or irregular parts, ... and where necessary pre-treat (e.g. round corners and edges with mortar), seal (e.g. STACSEAL-U1, STACTAPE-S) and/or stripe prime.

If needed, vacuum clean again and ensure that the surface is dry (≤ 5 % moisture, no condensate and/or ice crystals).

Apply immediately STACPRIMER-SiTi1-T.

Product preparation

STACOME-U1-COLDFLEX-T is a 1-component system, ready for use. Product temperature must be ≥ 3°C above dew point before opening the can.

Just before the utilisation, homogenise the can of STACOME-U1-COLDFLEX-T by mixing it ± 1 minute, with a low speed hand mixer (± 200 rpm).

- > Do NOT agitate after mixing
- > Do NOT add non-prescribed additives
- > Do NOT allow moisture into can (e.g. sweating).

Thinning

Standard not thinned.

If necessary (e.g. for spray application or viscosity change due to aging or exposure to moisture during transport and/or storage), add STAC-U-THINNER-S ≤ 5 %_w (6 %_v) and mix well.

Acceleration

Standard not accelerated.

Application

Conditions during application

Application is possible when the substrate temperature is 5–35°C, ≥ 3°C above dew point and air humidity ≤ 85 %.

Primer

Apply STACPRIMER-SiTi1-T before the application of STACOME-U1-COLDFLEX-T.

STACPRIMER-SiTi1-T has an excellent adhesion to most substrates. Do always a practical test to determine coating adhesion and/or compatibility. Apply first layer immediately after surface preparation.

Application STACOME-U1-COLDFLEX-T

STACOME-U1-COLDFLEX-T has to be applied between the minimum and maximum overcoat time of the previous layer.

STACOME-U1-COLDFLEX-T can be applied, making use of:

- > Roll: with short hair or mohair (eventually with squeegee and trowel)
- > Brush: with natural hair

Non-standard:

- > Airless: nozzle Ø 580–990 µm (23–39 mil)
pressure ≥ 28 MPa (x10=bar, x145=psi).

Spraying in the approved professional manner (e.g. fluent alternating 2-D movements, spray angle 40–80°).

For thicker layer on sloped or vertical surface:

- Apply multiple thin layers.

1. Horizontal application

Standard application consists of 1 layer with a DFT of ± 1 mm. Taking into account the solids content, 2 % spillage, etc... the theoretical consumption is ± 1,4 kg/m² (0,7 m²/kg, 1,3 L/m², 0,75 m²/L).

2. Vertical application

Standard application consists of 2 layers with a total DFT of ± 0,5 mm. Taking into account the solids content, 2 % spillage, etc..., the total theoretical consumption is ± 0,7 kg/m² (1,4 m²/kg, 0,65 L/m², 1,5 m²/L).

Curing time (1 mm DFT, at ≤ 85 % air humidity)

STACOME-U1-COLDFLEX-T		10°C	20°C	30°C
Tack free	±	8 hours	6 hours	4 hours
Full cure	90 % ±	2 days	1,5 days	1 day
	100 % ±	8 days	6 days	5 days
Adhesion max	±	8 days	6 days	5 days
Overcoat time min*	±	15 hours	10 hours	8 hours
Overcoat time max*	±	7 days	5 days	4 days
Walkable	±	2 days	1,5 days	1 day
Light service	±	2 days	1,5 days	1 day
Full service	±	8 days	6 days	5 days

Humidity, temperature and thickness affect curing time

**: on clean dry surface, without extra preparation*

Topcoat

A topcoat is not needed.

When the surface isn't clean, or the overcoat time is longer than the max in the "Curing table":

- If needed, clean with water and/or solvent by a rag
- Vacuum clean to dust-free and ensure that the surface is dry, also under the bricks and tiles (≤ 5 % moisture, no condensate and/or ice crystals)
- Apply first a thin layer **STACPRIMER-SITI1-T**: ± 40 g/m².

Cleaning equipment

Clean equipment before and after the application (e.g. **STAC-U-THINNER-S**, **STACLEAN-M**, **-ECO** and/or **-ECOTOOL**).

Safety

See SDS of **STACOME-U1-COLDFLEX-T**.

Storage

The shelf life is 12 months under standard conditions: keep containers carefully sealed, in dry well ventilated place, 10–25°C, away from source of heat or ignition, strong acids, bases, oxidants and direct sunlight.

Attention

An opened and/or partially used cans must be cut off asap from the humid ambient air by adding ± 3 mm **STAC-U-THINNER-S** "solvent float" and resealing the can. Limited shelf life.

Packaging

- ✓ **STACOME-U1-COLDFLEX-T**
 - standard 20 kg (± 19,0 L)
 - small 5 kg (± 4,8 L)

Supplements

- ✓ **STAC-U-THINNER-S** 22 kg (± 25,0 L)

Industrial containers on request.

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