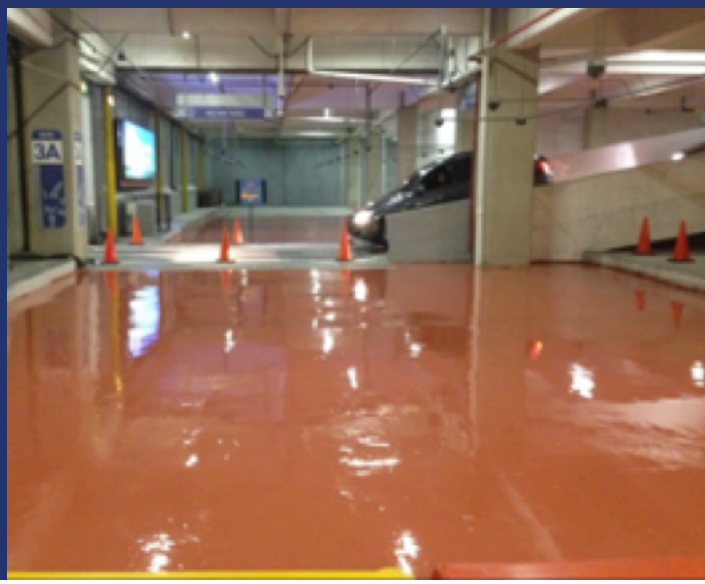
VELOSIT® PU 458

Elastic, Moisture-Cured, Single-Component, Transparent/Pigmented, Aliphatic (color-stable), Thin, Liquid-applied Polyurethane Sealer



Application fields

VELOSIT PU 458 is a single component, aliphatic, air-moisture cured, high-performance, liquid-applied polyurethane sealer that cures to form a thin, elastomeric, seamless, color-stable and glossy finish.

VELOSIT PU 458 is brush, roller or airless spray applied in a thin coating and is available in pigmented and transparent grades. The colored grade is used to cover VELOSIT PU 453 or VELOSIT PU 454 our aromatic-based, polyurethane waterproof coatings to extend color stability.

Typical applications include protection of polyurethane waterproof coatings such as VELOSIT PU 453 and VELOSIT PU 454 applied in:

- Balconies and terraces
- Car parks
- Stadiums and outdoor auditoriums
- Indoor and outdoor showrooms

Properties

VELOSIT PU 458 is a multipurpose sealer coat for deck coating systems.

VELOSIT PU 458 offers the following advantages:

- Excellent UV resistance
- Single component: long pot life
- Excellent uniform adhesion
- Very low viscosity.
- Easily applied without thinning
- Fast curing allows same day re-coating
- Highly elastic; above **300 %**
- **High tensile strength: 40 MPa (5801 psi)**
- Excellent mechanical and chemical resistance
- High abrasion and tear resistance
- Does not soften at elevated temperatures (up to + 80 °C)
- Capable of withstanding thermal shocks up to + 190 °C
- Remains elastic even at sub-zero temperatures (down to - 40 °C)

Application

1.) Surface preparation

1.1) Concrete
Substrates must have an open pore surface and sound with load-bearing capacity and free from cracks, dust, paint, oil or any adhesion inhibiting substances.

1.2) Polyurethane coatings (including anti-skid)
Substrate must be fully dry and within the open time for re-coating (within 72 hours of VELOSIT PU 453 or VELOSIT PU 454 application). In case open times have been exceeded, abrade the surface and scrub with Xylene, wait until fully dry then commence with the next step.

1.3) Tiles
Tiles must be well adhered to the substrate. Joints must be fully grouted with no pinholes. Remove the glazed surface.

2.) Priming and levelling

Priming
Generally priming is not required. When necessary (with very porous substrates) or when high levels of humidity exist, primers such as VELOSIT PU 411 or VELOSIT PR 303 should be considered.

Please consult VELOSIT's Technical Department for details.

Leveling of undulations
Depending on prevailing temperatures, use VELOSIT WP 101 to level off undulations. Allow 14 hours in case of VELOSIT WP 101 before application of VELOSIT PU 458.

3.) Processing

3.1) Concrete/plaster
Gently stir VELOSIT PU 458 using a slow speed drill attached with an appropriate mixing paddle for one minute. Ensure no air is entrapped.

3.2.1) Sealer over polyurethane
Gently stir VELOSIT PU 458 using a slow speed drill attached with an appropriate mixing paddle for one minute. Ensure no air is entrapped. Allow to dry for at least 7 hours prior to trafficking.

3.2.2) Anti-skid over polyurethane
Gently stir VELOSIT PU 458 using a slow speed drill attached with an appropriate mixing paddle for one minute. broadcast clean & dry sand (0.30 mm maximum grain size) into the wet VELOSIT PU 458 and immediately backroll to spread it evenly. Once dried, apply the second coat.

3.3) Tiles
Gently stir VELOSIT PU 458 using a slow speed drill attached with an appropriate mixing paddle for one minute. Ensure no air is entrapped.

Brush/roller
Use a soft bristle brush or short nap roller and work in two perpendicular coats observing a 6 to 24 hour waiting interval between coats @ 25 °C.

Airless spray
It may be necessary to dilute VELOSIT PU 458 with up to 5 % xylene to adjust the viscosity for spraying.

4.) Protection

Protect VELOSIT PU 458 from rain for at least 7 hours after application.

5.) Curing

No curing is required. VELOSIT PU 458 is fully cured within 7 days @ 25 °C.

Estimating

Consumption depends on surface roughness and absorptivity of the substrate. A 20 kg pack of VELOSIT PU 458 will typically cover:

Sealer on concrete:	150 m² (0.13 kg/m²)
Sealer on plaster:	120 m² (0.17 kg/m²)
Sealer on PU:	200 m² (0.10 kg/m²)
Anti-skid on PU + sealer:	100 m² (0.25kg/m²)
Sealer on glaze-removed tiles:	120 m² (0.17 kg/m²)

Cleaning

VELOSIT PU 458 may be removed with xylene. Once cured, VELOSIT PU 458 can only be removed mechanically.

Generally rollers used are very difficult to clean and should be replaced with new ones for the next application.

Quality features

Typical properties of VELOSIT PU 458 @ 25 °C:

Colors:	Transparent, Grey & Red
Solids content (ASTM D1353):	51% (+/- 1%)
Density:	1.0 kg/lt (+/- 0.5)
Viscosity (Brookfield):	475 cP (+/- 50)
Tack free (RH = 55%):	7 hours
Re-coat open time:	24 hours
Substrate temperature:	5 – 35 °C
Maximum Elongation (ASTM D412):	**+ 305 %**
Tensile strength (ASTM D412):	40 kg/cm²
Water Vapour permeability (ASTM E96):	0.8 g/m²h
Shore D hardness (ASTM D2240):	40
QUV Accelerated weathering-ASTM G53:	(2000 hrs) Passed
Service temperature:	- 40 °C to + 80 °C
Service temperature for short time:	+ 180 °C
Flash Point:	+ 42 °C

Packaging

VELOSIT PU 458 is available in 4 and 20 kg containers.

Storage

VELOSIT PU 458 has a minimum shelf life of 12 months when stored in original unopened containers (elevated from floor), in a dry area and away from direct sunlight where temperatures are maintained below 30 °C.

Safety

Please observe the actual valid material safety data sheet and follow the described safety measures for handling of the product.

Recommendations

VELOSIT PU 458 is only available for professional applicators.

Clear color does not proved a color stable protection to either VELOSIT PU 453 or VELOSIT PU 454.

All described product features are determined under controlled laboratory conditions according to the relevant international standards. Values determined under job site conditions may deviate from the stated values.

Please always use the latest version of this data sheet available from our website www.velosit.de.

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