



Novoplan[®] DPL

Deep-Pour, Self-Leveling Compound



DESCRIPTION

Novoplan DPL is a self-leveling, calcium-aluminate-based underlayment and repair mix for interior concrete and engineer-approved floors and is capable of being placed up to 4" (10 cm) in a single lift.

FEATURES AND BENEFITS

- Up to 4" (10 cm) application thicknesses in a single lift over concrete substrates
- Good flow properties

WHERE TO USE

- For leveling, smoothing and repairing interior floors before the installation of flooring systems and coverings
- Interior residential installations (rental apartments, condominiums and homes)
- Interior commercial installations (office buildings, hotel rooms/hallways, restaurants and cafeterias)
- Interior heavy commercial installations (hotel lobbies, convention centers, airports, shopping malls, grocery stores and department stores)
- Interior institutional installations (hospitals, schools, universities and libraries)

LIMITATIONS

- Do not install over substrates containing asbestos.
- For interior use only

- Install *Novoplan DPL* only between the temperatures of 50°F and 85°F (10°C and 29°C).
- Do not install over out-of-plane cracks, moving control joints or expansion joints.
- Do not install if the substrate has an MVER exceeding 5 lbs. per 1,000 sq. ft. (2.27 kg per 92.9 m²) per 24 hours using a calcium chloride test (reference ASTM F1869), and a relative humidity (RH) reading greater than 80% (ASTM F2170). Use a MAPEI moisture barrier product to treat concrete slabs with elevated moisture conditions. Consult MAPEI's Technical Services Department for product recommendations.
- Do not install *Novoplan DPL* over sheet vinyl, self-stick vinyl tile, luxury vinyl tile/plank (LVT/LVP), glue-down wood flooring, particleboard, hardboard (Masonite), Luan panels, oriented strand board (OSB), plywood, framed construction, waterproofing, crack-isolation or sound-control membranes, gypsum-based patching materials or any other non-dimensionally stable materials.
- Do not install if the maximum allowable deflection of the supporting surface exceeds L/360 (or L/720 for installations involving natural stone or agglomerates) when exposed to live or dead loads.
- Do not use in areas subjected to prolonged exposure to moisture. Contact MAPEI's Technical Services Department for waterproofing recommendations.

SUITABLE SUBSTRATES

- All substrates must be primed with the appropriate MAPEI primer before applying self-levelers. For details, see MAPEI's "Primers for Self-Leveling Materials" product selection guide and the appropriate primer's Technical Data Sheet.



- Sound, dimensionally stable, fully cured concrete (at least 28 days old) that is free from hydrostatic pressure
- Well-bonded and dimensionally stable ceramic tile, porcelain tile, quarry tile, natural stone, vinyl composition tile (VCT), cement and epoxy terrazzo, and epoxy-based moisture barriers over concrete substrates
- Properly installed cement backer units
- Durable, sound, stable and fully cured cement-based mortar beds

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- All substrates must be properly prepared, primed and structurally sound, stable, solid and dry.
- Concrete surfaces must be mechanically profiled to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3.
- On concrete substrates, fill in deep areas, holes and cracks with an appropriate MAPEI patching compound or screed. Fluid self-leveler may leak through to a floor below or other unwanted cavities.

For details on proper surface preparation, refer to MAPEI's reference guide "Surface-Preparation Requirements for Self-Leveling Underlayments" at www.mapei.com.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

General mixing

1. Mix water and *Novoplan DPL* powder at a ratio of 4.3 to 4.6 U.S. qts. (4.07 to 4.35 L) of cool, clean, potable water per 50 lbs. (22.7 kg) of powder.
2. Measure and pour the required amount of water for the number of bags to be mixed into a clean mixing vessel (mixing barrel or plastic pail measuring 5 U.S. gals. or 18.9 L). For best results, the water temperature should be approximately 85°F or 29°C. The mixing ratio must remain consistent. Do not overwater the mixture.
3. Slowly add the *Novoplan DPL* powder into the pre-measured water. Use a high-speed drill and an oval paddle mixer to mix *Novoplan DPL* to a homogenous, lump-free consistency. Continue to mix for 2 to 3 minutes. Do not overmix. Overmixing or moving the mixer up and down during the mixing process could trap air, shorten the pot life or cause pinholing during the application and curing process.

Pump mixing

1. The mixer and pump must be in good working condition. Periodic cleaning of pumping equipment is required per the manufacturer's instructions. Be sure to pressure-test the rotor and stator before mixing. To ensure a suitable mix

and flow, test the mixed material from the pump hose's end in a small test area before general application.

2. *Novoplan DPL* can be mechanically mixed at a ratio of 4.3 to 4.6 U.S. qts. (4.07 to 4.35 L) of cool, clean, potable water per 50 lbs. (22.7 kg) of powder. For best results, the water temperature should be approximately 85°F or 29°C. Use a continuous mixer and pump (and at least 140 ft. or 42.7 m of hose), or a batch mixer and pump (and at least 110 ft. or 33.5 m of hose).

Note: Cool-weather conditions may require a longer mixing time or additional hose length to ensure the best product performance.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Concrete substrates and ambient room temperatures should be maintained between 50°F and 85°F (10°C and 29°C) for 3 days before, during and after application.
2. Before product installation, close doors and windows, and turn off HVAC systems to prevent drafts during application and until the underlayment is cured. Protect areas from direct sunlight.
3. Quickly pour or pump *Novoplan DPL* onto the properly prepared and primed surface in a ribbon pattern. Set the width of the pour at a distance that is ideal for maintaining a flowable wet edge throughout placement. If a flowable wet edge cannot be maintained, reduce the width of the pour. For best results, use dams and section off the pour into work areas of about 150 to 200 sq. ft. (13.9 to 18.6 m²). Work as a team to provide a continuous flow of wet material, to avoid trapping air or creating a cold joint. Apply enough material to adequately cover all high spots.
4. Shortly after placing *Novoplan DPL*, use a gauge rake to spread the material and assist in gauging it to the desired depth. After achieving the desired depth, use a smoother to obtain an even surface.

CLEANUP

- Wash hands and tools with water promptly before the material hardens. Cured material must be mechanically removed.

CURING AND PROTECTION

- *Novoplan DPL* is self-curing; do not use a damp-curing method, or curing and sealing compounds.
- Protect *Novoplan DPL* from excessive heat or draft conditions during curing. Turn off all forced ventilation and radiant-heating systems, and protect installation for up to 24 hours after completion.
- Avoid walking on the installed surface for at least 6 hours after installation, depending upon temperature and humidity conditions.

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Product Performance Properties

Laboratory Tests	Results
Cured density	128 lbs. per cu. ft. (2.06 kg per L)
pH	11
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
Compressive strength – ASTM C109	
7 days	> 2,500 psi (17.2 MPa)
28 days	> 3,500 psi (24.1 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
28 days	> 700 psi (4.83 MPa)

Shelf Life and Product Characteristics before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C) and 50% RH
Physical state	Powder
Color	Gray

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Properties

Mixing ratio	4.3 to 4.6 U.S. qts. (4.07 to 4.35 L) of water per 50 lbs. (22.7 kg) of powder
Mixing time	2 to 3 minutes
Application temperature range	50°F to 85°F (10°C to 29°C)
Flow time	8 to 10 minutes
Time to accept light foot traffic	6 hours
Single-lift application range	1/4" to 4" (6 mm to 10 cm)
Minimum thickness over highest point in floor	1/4" (6 mm)
Waiting time for secondary applications of patches and skimcoats at 4" (10 cm) depths	24 hours
Drying time before installation of tile and stone flooring at 70°F (21°C) at 4" (10 cm) thickness	24 hours
Drying time before installation of moisture-sensitive floor coverings at 70°F (21°C) at 4" (10 cm) thickness	2 to 3 days after application is complete

CSI Division Classification

Cast Underlayment	03 54 00
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Approximate Coverage* per 50-lb. (22.7-kg) bag

Thickness	Coverage
1/4" (6 mm)	24 sq. ft. (2.23 m ²)
1/2" (12 mm)	12 sq. ft. (1.11 m ²)
1" (2.5 cm)	6 sq. ft. (0.56 m ²)
2" (5 cm)	3 sq. ft. (0.28 m ²)
4" (10 cm)	1.5 sq. ft. (0.14 m ²)

* Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions, type of equipment, thickness applied, and application methods used.

Packaging

Size
Plastic bag: 50 lbs. (22.7 kg)

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DPL

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- Protect the installation from traffic, dirt and dust from other trades until *Novoplan DPL* is completely cured and final flooring has been installed.
- Do not expose *Novoplan DPL* to rolling dynamic loads, such as fork lifts or scissor lifts, for at least 3 days after installation.

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI meets the health and well-being requirements of product certification programs, contact the MAPEI Sustainability Team at 1-800-992-6273.

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at

www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.** Before using, the user must determine the suitability of our products for the intended use,

and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



MAPEI Headquarters of North America
1144 East Newport Center Drive
Deerfield Beach, Florida 33442
1-888-US-MAPEI (1-888-876-2734) /
(954) 246-8888

Technical Services
1-800-992-6273 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)
Customer Service
1-800-42-MAPEI (1-800-426-2734)

Services in Mexico
0-1-800-MX-MAPEI (0-1-800-696-2734)
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