

## TECHNICAL SHEET 02.04.01-eng

### LEVELLING COMPOUNDS

# NIVELIN D

Thick-coat levelling compound

## 1. Description, Application

NIVELIN D is lime-cement levelling compound processed with polymeric binders and intended for smoothing – levelling of façade and interior wall surfaces. It is distinguished by low elastic module and high water repellence. It shrinks very little during drying and hardening therefore, it can be applied in a coat in thickness of up to 6 mm and it can easily be used to fill local indentations, chinks, holes and similar damages in depth of up to 10 mm. On facade surfaces, it is used to smooth lime and lime-cement renders, and in the interior, it can be used on all types of mineral surfaces: to smooth lime, lime-cement and cement renders, and also to mend flaws and smooth unplastered concrete surfaces.

Façade surfaces levelled with NIVELIN D can be coated with all types of façade paints, while interior surfaces can be painted with any of interior dispersion wall paints and they can be wallpapered without any limitations.

## 2. Packaging

Paper bags containing 5 and 20 kilos

## 3. Technical Data

density (ready-to-use compound) (kg/dm <sup>3</sup> )	~1.58	
Coat thickness (mm)	1.5 to 5 locally up to 10	
Drying time T = +20 °C, relative air humidity = 65 % (hours)	Touch dry	~6
	Protect against rainfall	~24
Water-vapour permeability EN ISO 7783-2	$\mu$ coefficient (-)	<30
	$S_d$ value (t = 5 mm) (m)	<0.15 Class II (medium water-vapour permeability)
Water absorption EN 1062-3 (kg/m <sup>2</sup> n <sup>0.5</sup> )	<0.20 Class W2 under EN 1015-18	
Fire response	A1	
Thermal conductivity $\lambda$ (tab. value) (W/mK)	0.93	
Compressive strength EN 1015-11 (MPa)	>4.0 CS II	
Adhesion EN 1015-12 (MPa)	0.6 100 % B (fracture in the levelling compound)	



Adhesion after weathering EN 1015-21 (MPa)	0.5 100 % B (fracture in the levelling compound)
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Main ingredients: cement, hydrated lime, polymeric binder, silicate and calcite fillers, cellulose thickening agent

#### 4. Surface Preparation

The surface should be solid, dry and clean, without any badly adhered particles, dust, salts that are easily soluble in water, fat linings and other filth. Hoover or sweep dust and other non-adhered filth, and wash away the non-decomposed remains of paneling oils from concrete surfaces with a high-pressure water blaster (hot water or steam). Remove paint coats and coatings from the already painted surfaces. It is obligatory to disinfect surfaces infected with wall mould prior to applying the levelling compound.

Prior to the application of a levelling compound, the newly applied base-coats have to dry or mature at least 7 to 10 days for each cm of their thickness. The levelling compound is applied to new concrete surfaces only a month after concreting (stated drying times of the surface are valid in normal conditions: T = +20 °C, relative air humidity = 65 %).

Do not apply any primers onto the surface prior to the application of the levelling compound!

#### 5. Preparation of Levelling Compound for Application

Prepare the levelling compound by pouring 20 (5) kilos of dry compound (the content of one bag) into 6 (1.5) liters of water. Mix with an electric mixer or manually until the compound becomes homogenous. Wait for 10 minutes for the compound to swell. Then stir it well again. If necessary, add some water.

The prepared compound must be used within approximately 2 hours.

#### 6. Application of Levelling Compound

Apply the compound in a coat in the thickness of up to 6 mm. Apply it manually – with a stainless steel smoothing trowel, or spray it using aggregates for machine application of fine render finishes. Determine the optimum spraying parameters by testing, while following instructions of producers of mechanical equipment. Use a stainless steel smoothing trowel to expand the compound across the processed surface, to remove excess compound and to smooth the surface as much as possible.

When the applied compound partially hardens - approximately 10 to 20 minutes after the application (it can also be done sooner or later depending on the microclimatic conditions and absorbency of the surface), moisten the surface and smooth it with circular moves using a smoothing trowel made of expanded polystyrene, wood or plastic. Use a stainless steel smoothing trowel to iron smaller surfaces. The described treatment can be substituted with manual or machine polishing of the dry and hardened application – in normal conditions (T = +20 °C, rel. air humidity = 65 %), the optimum conditions for polishing are achieved if the application dries for approximately 12 hours for each mm of its thickness. Select between sandpapers no. 80 and 120.

If you wish the processed surfaces to appear rustic, do not smooth or polish the application. The desired relief is achieved by processing the fresh application with various masonry and painting tools or other devices. Do not excessively wet the surface while working to reduce the washing away of binders contained in the surface layer of the application to the lowest possible degree.

The application of the levelling compound is possible only in suitable weather or microclimate conditions: the temperature of the air and the wall surface should be between +5°C and +35°C and the relative air humidity should be below 80 %. Protect façade surfaces from sun, wind and rainfall using protective scaffold nettings; however, do not conduct any work in rain, fog or strong wind (≥30 km/h) despite such protection.

Approximate or average consumption: NIVELIN D ~ 1.5 kg/m <sup>2</sup> for a mm thick application
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#### 7. Tool Cleaning, Waste Management

Clean the tools thoroughly with water immediately after use.

Keep the unused powder compound in a well sealed packaging for potential repairs or later use. Mix the remains that



cannot be used and wastes with water and when they harden, deposit them onto the dumping grounds of construction (waste classification number: 17 09 04) or municipal waste (waste classification number: 08 01 12).

Cleaned packaging can be recycled.

## 8. Safety at Work

Apart from general instructions and regulations for construction, plastering and painting works, please consider that the product contains lime and cement and is therefore classified among dangerous preparations labelled as Xi IRRITANT. The content of chromium (Cr 6<sup>+</sup>) is lower than 2 ppm.

Protection of the respiratory system: the use of a safety mask in case a lot of dust is raised. Protection of hands and body: work clothing, preventive protection with a protection cream and the use of protective gloves are recommended in the case of prolonged exposure of hands. Protection of eyes: protective glasses or a safety mask during spraying.

### FIRST AID:

Contact with skin: remove clothing, which has been wetted, and rinse the skin with water and soap. Contact with eyes: immediately widen the eyelids, rinse thoroughly with clean water (10 to 15 minutes), and seek medical advice if necessary. Ingestion: drink a little water several times, seek medical advice immediately.

Warning signs on packaging	<p style="text-align: center;">Xi</p>  <p style="text-align: center;"><b>IRRITANT!</b> THE PRODUCT CONTAINS LIME AND CEMENT!</p>
Special measures, warnings and observations required for safe work	<p>R36/38 Irritating to eyes and skin. R41 Risk of serious damage to eyes.</p> <p>S2 Keep out of the reach of children. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of water. S37/39 Wear suitable gloves and eye/face protection. S46 If swallowed, seek medical advice immediately and show this container or label.</p>

## 9. Storage, Transportation Conditions and Durability

Protect the product against moistening during transport. Store in dry and airy places and out of reach of children!

Shelf life when stored in an originally sealed and undamaged packaging: at least 12 months.

## 10. Quality Control

The product's quality characteristics are determined by the internal manufacturing specifications as well as by the Slovenian, European and other standards. JUB ensures achieving of the declared or set quality level by the ISO 9001 system for total quality management and control, which has been implemented at JUB for many years and which comprises daily quality checks in its own laboratories, occasionally at the ZAG Construction Institute in Ljubljana and other independent expert institutions in Slovenia and abroad. During the manufacturing process, JUB strictly complies with the Slovenian and European standards for protection of the environment and for ensuring security and health at work, which is confirmed by the ISO 14001 and OHSAS 18001 certificates.





JUB d.o.o. Dol pri Ljubljani 28 SI-1262 Dol pri Ljubljani Slovenija 08	
EN 998-1 Levelling mortar compound to be used on the exterior and in the interior of a house (GP, CS II)	
Fire response	A1
Adhesion	0.6 MPa 100 % B
Water absorption	W2
Water vapour permeability coefficient $\mu$	<30
Thermal conductivity $\lambda_{10, dry}$	0.83 W/mK, P = 50 % 0.93 W/mK, P = 90 % (tab. value EN 1745)
Resistance to freezing/thawing	NPD

NPD: No Performance Determined

## 11. Other Information

The technical instructions in this brochure are given based on JUB's experience and are given as a guideline for achieving optimum results. JUB cannot accept any responsibility for the damage caused by incorrect selection of a product, incorrect use or unprofessional work.

This technical sheet supplements and replaces all preceding editions. JUB reserves the right to change and supplement data in the future.

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