Technical Data Sheet

NEMPAL 121 Universal Acrylic Gap Sealant

Water-based Acrylic Latex Gap Sealant

Description

NEMPAL 121 Universal Acrylic Gap Sealant is a cost-effective, water-based acrylic latex gap sealant formulated for general-purpose sealing applications. It is paintable and has good adhesion to most types of substrates.

The sealant exhibits great gunning and tooling characteristics, making application works easy and fast. Excess of sealant can be easily cleaned up with wet cloth or water, so use of masking tape is optional. It is suitable for sealing gaps and joints even if there are slight movements or vibrations, in which non-elastic fillers, joint compound or putties would fail and crack if used.

Technical Properties

Curing System	:	Water Evaporation
Appearance	:	Non-sagging Soft Paste
Base	:	Water-Based Acrylic Latex
Colour	:	White
Density, g/cm^3	:	1.55 ± 0.05
Resistance to Flow, mm	:	0
Consistency	:	9.5 – 11.5
Extrudability, g/min	:	>100
Ultimate Tensile Strength, MPa	:	≥1.0
Ultimate Elongation, %	:	>200
Shore A Hardness	:	40 – 52
Tack Free Time, min	:	<120
Curing Rate, mm/24h	:	1.5 - 2.0
Heat Weight Loss, %	:	≤25
Application Temperature	:	5 °C to 50 °C
Service Temperature	:	-10 °C to 75 °C

Applications*

It may be used for sealing gaps and joints where slight movements are anticipated (less than +/-12% of joint width).

- General sealing applications: door and window perimeter, cabinet and wardrobe, floor skirting board, architrave, cornice, wainscoting, soffit, drywall, insect screen, security mesh door, decorative panel, etc.
- Suitable for various substrates: concrete, metal, PVC / uPVC, wood, gypsum boards, FRC boards, marble, ceramics, tiles, painted surfaces, etc.

** Users are responsible to carry out test prior to installation to confirm compatibility with actual substrates, work conditions, and service requirements.*

Features & Benefits

- Cost effective
- Paintable
- Slump resistant - superior gunning & tooling
- Excellent sealing and adhesion properties to most substrates
- Water-based - easy clean up
- Non-staining
- Environmentally friendly
- More flexible than conventional fillers, joint compound or putties – won't degrade and crack with slight movements

Directions for Use

1. Remove all residual dirt, grease, oil, frost, water, and old sealant thoroughly. Clean the surface with a piece of white cloth with solvent, then wipe immediately with another piece of clean cloth. Do not use soap or detergent.
2. For a neat finish and less clean up works, apply masking tape and remove it before sealant skins over.
3. Cut the nozzle to desired bead width at 45° angle, screw it onto cartridge and place cartridge into caulking gun to apply sealant.
4. Apply sealant into the bottom of the joint so that it completely fills the joint, wetting both sides, before moving the caulking gun. Avoid moving too quickly and leave air traps in joint. Do not simply lay a bead on the surface as the sealant will not penetrate the joint by itself. Use backing material or bond breaker tape in joint to avoid three-sided bonding.
5. Tool the sealant within 15 minutes after application to provide a smooth finish, and to ensure the sealant wets both sides of the joint for proper bonding.
6. Depending on environment variables, the sealant will have its skin formed in 15 minutes after application. Allow to dry for one hour before applying water-based paint, or 24 hours for oil-based paint.
7. Curing time depends on temperature, humidity, and thickness of sealant applied. Longer curing time is expected in damp and cold area. Uncured sealant can be cleaned up with wet cloth or water. Cured sealant can only be removed mechanically.

Joint Design

- Joint design should take various factors into considerations, like type of adjacent substrates, temperature changes, etc., please refer to ASTM C1472 for details.

- Sealant should be applied in bead size that complies with the movement capability of the sealant (+-12%) in relation to the anticipated joint width due to joint movements.
- In general, for joint width
    - between 6 to 12 mm, width:depth ratio = 1:1
    - between 12 to 25 mm, width:depth ratio = 2:1
    - between 25 to 50 mm, sealant depth is =<13 mm.
- If sealant is applied in a corner/fillet joint profile, ensure a minimum of 6 mm bonding on both sides of the substrates.

Limitations

It is NOT recommended for the following applications:

- Direct exposure to sunlight during service
- Traffic areas subject to abrasion
- Areas with permanent water immersion or constantly damp
- Expected joint movement is >12%
- In totally confined joints
- On frost laded, wet or contaminated surfaces
- Surfaces that are in direct contact with food/potable water

Storage, Shelf Life, and Packaging

- Store properly in a dry and well-ventilated place with temperature below +30°C.
- Use within 24 months from date of production.
- Cartridge – 400 grams (24 cartridges / carton)

Handling Precautions

Always test before use - user is responsible to test before using to confirm the sealant produces desirable results.

For health and safety information, please refer to the latest Safety Data Sheet.

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