



# Arroflex PU-412

## Modified PU Adhesive

Multipurpose, two component, Polyurethane thinset adhesive for fixing tiles and stone on interior and exterior floor & wall. Suitable for various drywall substrates including metals.

### CLASS:

IS 15477:2019 TYPE 5 TS2 Adhesive

EN 12004:R2T Adhesive



## Features / Benefits

- Two components, just mix and use.
- High strength, chemical resistant
- Economical & Easy to use
- Bonds to various substrates including metals
- Complies to EN/ISO with a R2T classification.
- Water, freezing, thermal shock resistant
- Flexible and heat resistant.

## Complies

- IS 15477 : 2019 Type 5T S2 Adhesive
- EN 12004 : R2T ADHESIVE

## Working Properties (21° C)

Appearance	Off white after mixing
Mixed Density	1800 Kg/ Cubic Mtr.
Shelf life	12 Months when stored under standard conditions
Application temperature	12° C to 40° C
Pot life	>1 hour
Open time	>1 hour EN 134 6
Adjustability	>1 hour
Vertical slip	< 0.5 mm EN 1308
Foot traffic	24 hours
Grouting	24 hours
Interval before normal use	3 days

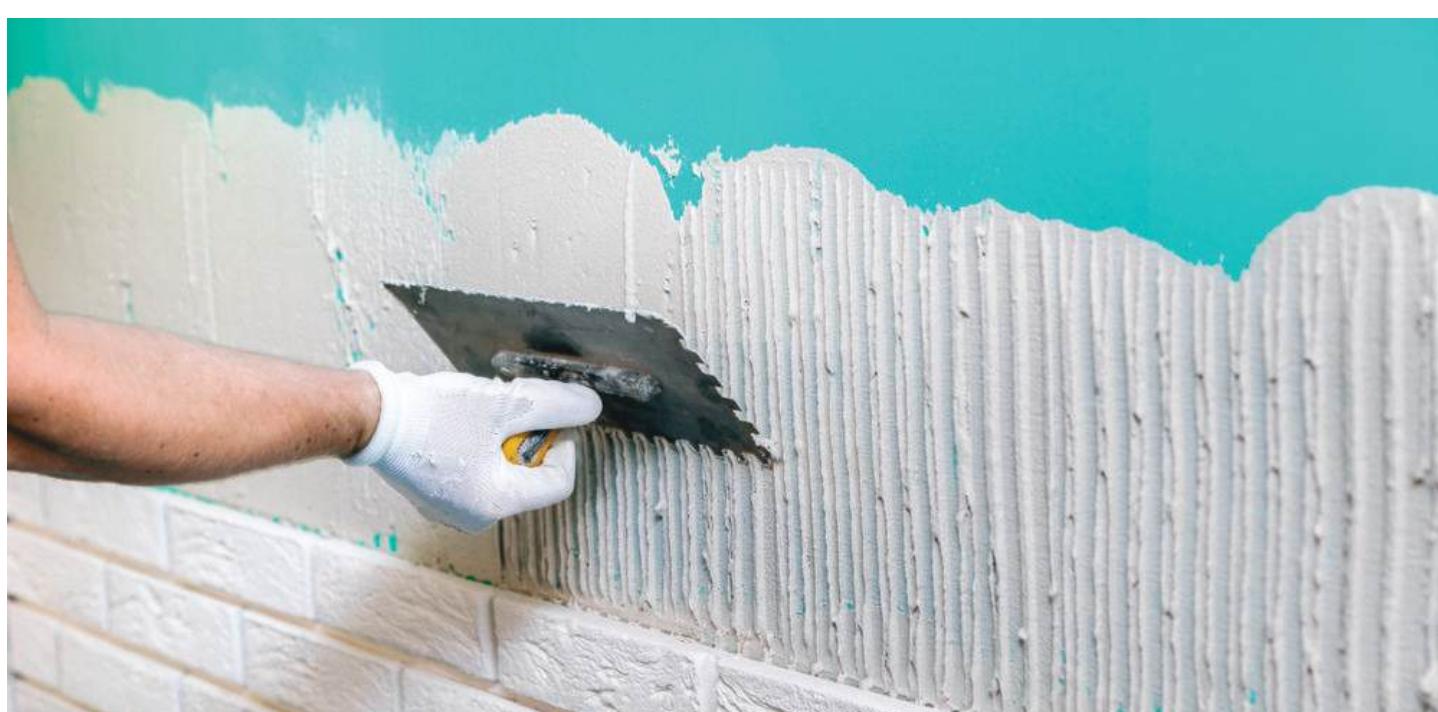
## Suitable Substrate

- Concrete – VDF, Tremix and MIVON
- Concrete Masonry & Brick Masonry
- Cement Mortar Beds & Plaster
- Metal floors and walls
- Tile and Stone
- Wood & Plywood\*\*
- Cement Backer Board\*\* & Gypsum board\*\*
- Cement Terrazzo
- Engineered stones & Marbles
- Epoxy or PU resin based substrates
- Rubber, PVC and Linoleum substrates

\*\*Consult the backer board manufacturer's data sheet for the specific recommendations and load bearing capacity of specific board intended for use.

## Application

Designed especially for interior and exterior floor and wall installations of all types of ceramic tile, vitreous, semivitreous tile, glass mosaic tiles, precast terrazzo, engineered stone, metal tiles and natural stones over concrete and on a variety of substrates including metal substrates and drywall boards.



## Technical Data

EN / ISO Data		
Test/ Reference	Requirement	Typical Values
Vertical Slip - EN 1308	≤ 0.5mm	0.1-0.2 MM
Tensile Adhesion - Open time Not less than 20 Min. - EN 1346	≥ 0.5 Mpa	1.5 - 1.8 Mpa
Initial Shear Bond - EN 12003, Clause 7.3	≥ 2.0 Mpa	2.3 - 2.5 Mpa
Tensile Adhesion Water Immersion - EN 12003, Clause 7.4	≥ 2.0 Mpa	2.2 - 2.3 Mpa
Shear Adhesion after thermal shock - EN 12003, Clause 7.5	≥ 2.0 Mpa	2.1 - 2.2 Mpa
Transverse Deformation	≥ 5.0 Mpa	6.0 - 7.0 Mpa

The adhesive mortar conforms to EN 12004 / ISO 13007 as R2T

Specifications subject to change without notification. Results shown are typical but reflect test procedures used. Actual field performance will depend on installation methods and site conditions.

## Installation

### Surface Preparation :

All surfaces should be between 40° F(4° C) and 95° F(35°C) and structurally sound, clean and free of all dirt, oil, grease, loose peeling paint, laitance, concrete sealers or curing compounds.

Substrates must be compact and consistent, free from any rising dampness, with no loose, flaky, or imperfectly anchored parts. The substrate must be stable, without cracks and have already completed the curing period of hygrometric shrinkage. Uneven areas must be corrected with suitable smoothing and finishing products.

Installation shall be made on a dry surface. New concrete slabs must be damp cured and at least 28 days old prior to application. All slabs must be plumb and true to within 1/4" (6mm) in 10ft (3m). Expansion joints shall be provided through the tile work from all construction or expansion joints in the substrate.

Follow ANSI Specification AN-3.8 " Requirements for Expansion Joints" or TCA Detail EJ171-91 "Expansion Joints". Do not cover expansion joints with mortar. Glass Mesh Mortar Unit: follow TCA installation detail W244.

### Mixing :

ARROFLEX PU - 412 is prepared by mixing together parts A and B from the bottom upwards, using a low-rev (≈ 400/min.) helicoidal agitator, with the preset ratio of 1: 25 of the packs. Pour part B into the bucket containing part A, being careful to mix the two parts uniformly until a smooth, even coloured mixture is obtained. The user must mix a quantity of adhesive which can be consumed within 1 hour at +25 °C / 50% R.H.

Packs of ARROFLEX PU - 412 adhesive must be stored at a temperature of ≈ +25 °C for at least 2/3 days prior to use.

## Application

### A) Tile Stone :

Apply adhesive to the substrate with the flat side of the trowel, pressing firmly to work into surface. Comb on additional adhesive with the notched side. Use the proper sized notched trowel to ensure full bedding of the tile. Spread as much adhesive as can be covered with tile in 10 minutes. Back butter ARROFLEX PU-412 large format tiles (> 12"x12") to provide full bedding and firm support. Place tiles into wet, sticky adhesive and beat in using a beating block and rubber mallet to embed tile and adjust level. Check adhesive for complete coverage by periodically removing a tile and inspecting bedding adhesive transfer onto back of tile. If adhesive is skinned over (not sticky), remove and replace with fresh adhesive.

## B) Glass Mosaic tiles

The ARROFLEX PU-412 adhesive shall be applied to the surface to be tiled with a notched trowel using a scraping motion to work the adhesive into good contact with the surface to be covered. Notch trowel with notches approximately 4mm is recommended to get a bed thickness of 1.5-2mm. V-notch of 3mm also can be used to get bed thickness of 1.5mm. Apply only so much that can be covered with tile within 10-15 minutes or while the adhesive surface is still tacky. The Glass Mosaic tiles shall then be set in place and beaten gently with mallet or grouting float to insure 100% full bedding. Tiles shall be aligned to achieve uniform joints and then allowed to set until firm. Excess adhesive must be cleaned from the surface of the tile with a wet cloth or sponge while the adhesive is fresh and has not hardened.

After the tiles are set firm, the face of the sheets of front mounted glass mosaic tiles shall then be dampened and the face mount paper can be removed.

### Installation of Tile / Stone on Drywall boards :

When the installation of tile or stone is done using ARROFLEX PU 412, on drywall boards like cement backer board, wood board, plywood board, calcium silicate board, gypsum wall board, it is advised to provide spacers and fill the resulting grout joints with flexible materials like Arrotile Grout / silicone sealant / acrylic sealant.

### NOTE TO THE SPECIFIER AND INSTALLER :

While installing tile/stone on the external walls and floors, we need to provide the joints by creating spaces between the tiles/stones and filling them up with Arrotile cement based grout mixed with Tetracoat WRP OR silicone sealants. In the absence of spacer joints, the surface movements can push tiles/stones away from the substrate causing de-bonding of tiles or stones.

It is also important to note that the exterior tile / stone installations are provided with joints (spaces) on the periphery of the area without allowing the tile / stone to be bound by the peripheral masonry work or plaster.

It is also important to note that the tiles/ stones are not installed directly on expansion joints. The expansion joints need to be run through the tile / stone work till top surface and filled with materials which accommodate the movements.

## B) Grouting:

Grout installation shall be commenced after a minimum of 24 hours curing time at 70°F (21° C). Grout with Arrotile Cement Based Grout mixed with Tetracoat WRP For maximum stain resistance of Internal spacer joints applications, use Arrotile AFIX Grout OR Arropoxy Tile Grout. For maximum stain resistance of External spacer joints applications, use Arrotile Grout.

## Packaging

Available in 4 Kg PAIL.

## Coverage

08 to 09 Sft per pack of 4 Kg with 1/4" x 1/4" (6mm x 6mm) square notched trowel for a bed of 3mm.

Coverage will vary depending on trowel notch size, type and size of tile and substrate smoothness and evenness.

For Feedback / Suggestion & Complaints:

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