

# Installation Guide for Passive Purple® & Passive Purple® Editions



## 1. Area of use:

Passive Purple® & Airtight White® (The white version of Passive Purple®) both dry to form a permanent airtight membrane for the following building parts:

- Walls
- Ceilings
- Floors
- Floor/wall connections
- Wall/ceiling connections
- Wall/wall connections
- Walls – surface sealing

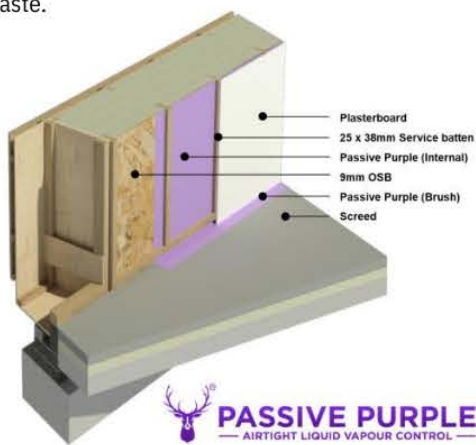
## 2. System

Passive Purple® is a liquid-applied spray on intelligent airtight vapour control membrane.

Suitable substrates include concrete, masonry, plaster/render, engineered wooden boards, tapes, membranes, aluminum, steel, PVC, timber, polyurethane foam, PIR insulation, and blockwork.

Passive Purple® dries to form an elastic membrane with strong adhesion to the substrate.

Passive Purple® is a water-based dispersion without organic solvents. Dried material can be disposed of as non-hazardous waste.



Timber frame wall.

## 3. Materials and tools commonly:

- Stanley Knife, bag for waste.
- Masking tape.
- Vacuum cleaner (also for removing standing water).
- Non-shrink polyurethane foam and Passive Purple®.
- Airless pump + accessories + extension cord.
- Empty buckets, water for cleaning of tools.
- Handheld paddle mixer.
- Products: Passive Purple®.
- Surface temperature meter, substrate must not be below 5°C.
- Personal safety equipment: Safety glasses, gloves, helmet, overalls, and masks.



Vacuum all debris.



Passive Purple Internal.



Graco ST Max II 495 airless sprayer machine or similar.

#### 4. Individual protection:

Consult the Materials Safety Data Sheet prior to application. Always work in well-ventilated areas. Avoid direct skin contact when product is in wet conditions. You are advised to wear eye protection, safety shoes overalls, mouth mask, gloves, and safety wear during application.



Gloves



Goggles.

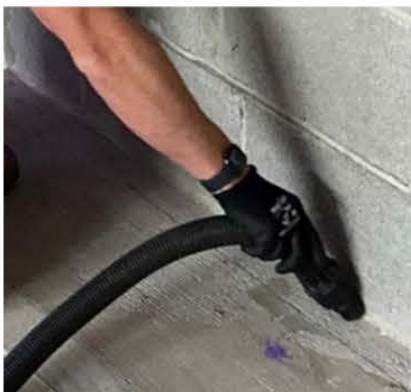


Spray suit.

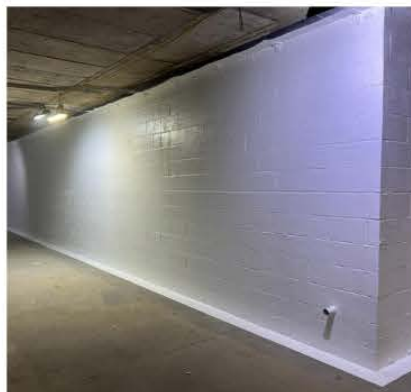
#### 5. Inspection and preparation

**The successful sealing of Passive Purple® depends on the thorough preparation of the substrate. The following preparation instructions need to be followed.**

- Standing water, dust, and free particles are removed with the vacuum cleaner. Passive Purple® may be applied to humid surfaces.
- The ambient and substrate surface temperature must be below 5°C.
- Fill holes and gaps bigger than 2mm Passive Purple® Brush or if larger above 7mm occur, then treat with foam or mortar. When using polyurethane foam, cut off the excess after hardening.
- For joints where movements are expected during the lifetime of the construction, apply Passive Purple® –
- Brush over the joint which will then later be overcoated with Passive Purple®.
- Apply Passive Purple to connections such as between the wall and damp course or joints and penetrations on the OSB/MGO or block work.



Vacuum all debris.



Passive Purple Airtight White edition retrofit.



Passive Purple Airtight White edition internal vapour control.

## 6. Setting up the airless spray machine

**Open the tub of Passive Purple® and mix till a smooth consistency with a handheld paddle mixer at low speed.**

- Place airless spray device above pail with product.
- Prime machine.
- Pump wastewater into waste bucket until product is circulating.
- Build up pressure to 120 – 150 bar.
- Repeat for spray hose/gun until product is circulating.
- A commonly used tip is the 517-spray tip.
- After use, clean airless spray device with water, in the way same as set up.
- Clean filters.



**Graco ST Max II 495 airless spray machine.**

## 7. Application:

- Open the pail of Passive Purple® and mix for a smooth consistency with a handheld paddle mixer at low speed, do not add water or solvents.
- Passive Purple® is then applied as part of one motion up and down the walls to make it 2 passes in total. Total minimum consumption should be 0.5kg-1kg/m<sup>2</sup> or about 500-1000 microns to be verified with a thickness gauge as described in paragraph 8 below (Wet film gauge). More information on thickness and its effects on the product can be found on the products SD card.
- Apply using an airless spray machine.
- During the drying process typically allow 24-48 hours to fully dry, (weather dependent).
- In case of using an airless spray machine for the application of Passive Purple® spray at 30-60cm from the surface at a 90° angle on the surface, as to minimize overspray.
- Avoid (local) layer thickness of above 1500 microns for example in joints/openings in the surface which have not been prepared properly.
- Thickness is verified with a wet film thickness gauge, to ensure minimum total coverage of 500-1000 microns. In general, when the substrate is not visible anymore, the coverage of min 500-1000 micron is more than likely reached.
- Clean gauge after use.

- Passive Purple® will change colour from bright bright purple to a darker purple, dark purple means that Passive Purple has dried out and is ready to finish on.
- Apply overlaps onto adjoining areas of around 150mm



**Passive Purple spray install.**



**Passive Purple Airtight White Edition retrofit.**



**Passive Purple retrofit.**



**Timber frame.**



**Timber frame.**

## **8. Joining with other airtightness systems:**

If an area to be sealed with Passive Purple® needs to be joined with another membrane please make sure it's sealed according to the membrane system manufacturer's specifications, so there is no gap on the sides of the membrane onto which Passive Purple® will be sprayed.

In case of doubt, consult the technical department of Intelligent Membranes®.

If an area to be sealed with Passive Purple® needs to be joined with another area where airtightness is achieved with engineered wooden boards with taped seams, any gap between the two areas needs to be treated as outlined in paragraph 4. If the joint is made between concrete or masonry structures and wooden framed walls or roofs that are subject to shrinking and other movements butyl tape should be provided before final application of Passive Purple®.

## **9. Quality control:**

Check visually to ensure complete coverage; If needed, apply an additional coat.

- Thickness is verified with a wet film thickness gauge for each layer, to ensure minimum total coverage of 500-1000 microns.
- If required, use a wet film gauge to:
- Identify level and smooth patches of substrate.
- Select the appropriate side of the thickness gauge for thicknesses around 500-1000 microns.



- Press the appropriate side of the gauge into the wet film immediately after the application.
- Remove gauge and inspect the underside of the comb fingers. The last wetted finger indicates the wet film thickness value printed by this finger.
- Repeat the measurement's to make a reasonable number of spot checks. As a rule of thumb one measurement should be taken for each 5m<sup>2</sup> of coating.

## 10. Don'ts:

- Do not apply Passive Purple® on a polluted or dusty substrate.
- Do not dilute Passive Purple® with water or solvents; avoid contact with any type of liquid during drying.
- Do not leave the lid off the container for long periods, please re-seal immediately after use.
- Do not use a heat source at close range to aid drying.
- In case of damage to the Passive Purple® coating after drying, simply restore by cleaning the surface of the coating and re-applying an extra layer which is easily done with the brush version if it gets damaged when drying.
- Do not apply Passive Purple whilst the substrate is under pressure: pressure testing must only be carried out once Passive Purple is fully cured.

## 11. Storage:

Store all containers in a dry frost free environment between 5°C and 35°C, avoid direct sunlight or contact with a heat source.

Seal part used containers by pushing down firmly in the center of the lid when closing to expel air, ensure lid is closed tightly.

Do not use product from damaged or broken containers.

Shelf life: product will keep for 12 months from date of manufacture if kept according to these instructions in unopened containers. See batch number for date of production: ddmmyyxx (dd:day/mm:month/y:year/xx:productcode).

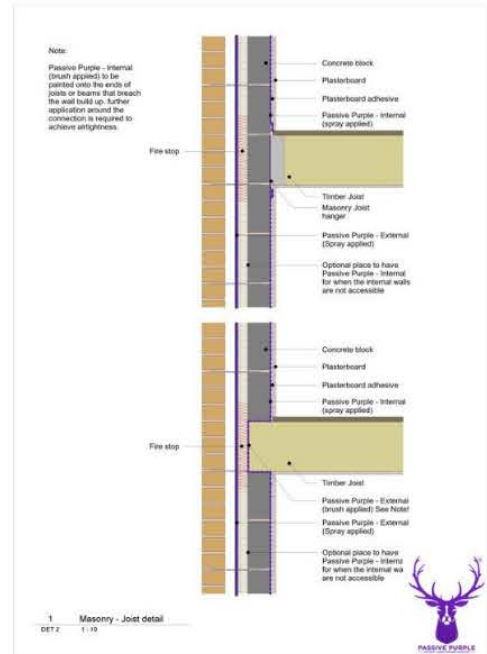
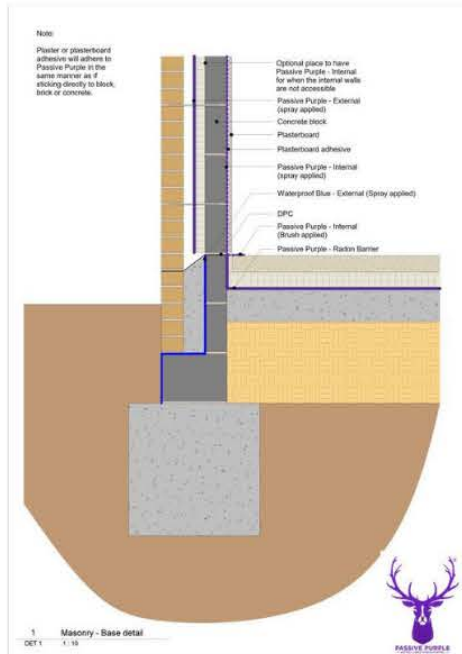
## 12. Disposal:

Please refer to product SDS information. Please clean and recycle all used tubs.

## 13. Other areas of use:

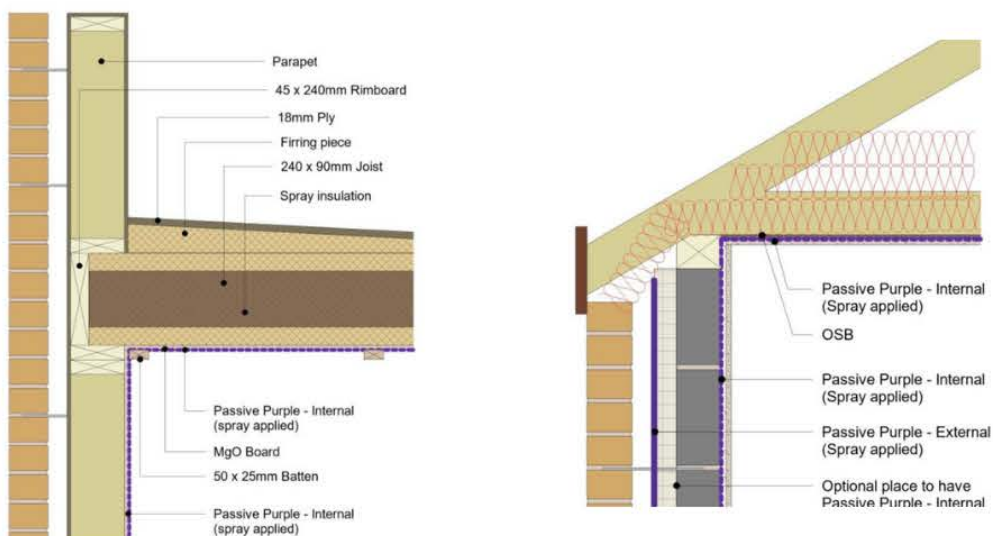
### Walls :

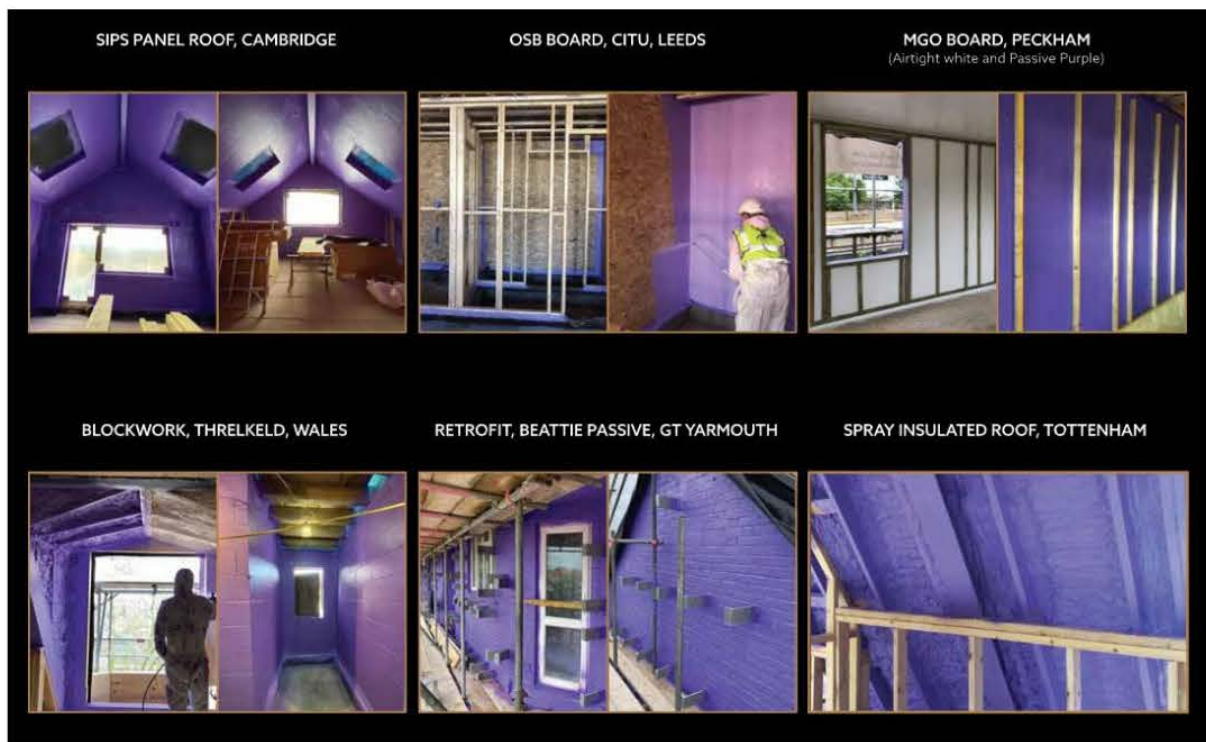
Fill gaps bigger than 2mm with Passive Purple® brush. Any gaps greater than 7-10mm, please repair using non-shrink polyurethane foam or mortar.



### Wall/Ceiling connection:

Fill gaps bigger than 2mm with Passive Purple® brush. Any gaps greater than 7-10mm, please repair using non-shrink polyurethane foam or mortar.





*Precautions:*

*Consult the Materials Safety Data Sheet prior to application. Always work in well-ventilated areas. Avoid direct skin contact when product is in wet condition. You are advised to wear eye protection, face mask, gloves and safety wear during application.*

*Further advice:*

*This advice is based on the experience of the Intelligent Membranes® for further information, please contact our head office. Product sheets, safety data sheets and independent test reports are available on request.*

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