Aquaproof HDPE PSA

HDPE PRESSURE SENSITIVE ADHESIVE MEMBRANE

Description

Aquaproof HDPE PSA is a unique, high performance, flexible High-Density Polyethylene (HDPE) sheet with pre-applied pressure sensitive adhesive and a reactive inorganic fine granule layer on it, manufactured & supplied in thickness of 1.2 or 1.5 mm, designed for waterproofing basements & podiums of new buildings. The membrane is designed for adhesion to poured concrete for easy application below rafts & reinforcements.
Based on advanced polymer chemistry, the membrane has excellent resistance to chemical acids, bases, alkalis, salts and other corrosive materials, while providing a barrier to water seepage from below ground. The sheet remains flexible over years, maintaining its integrity and continuing to provide protection.
High mechanical properties of the membrane ensure superior puncture resistance and tensile strength, while enabling excellent bond along the edges.

Applications

- Basement Waterproofing
- Below raft
- Side walls
- RCC Podiums
- Car Parks
- Roads & Bridges
- Canals, Subways, Tunnels & Underpass
- Underground Metro Stations

Advantages

- Supplied in pre-manufactured standard thickness. No need to worry of thickness variation at site, unlike liquid applied systems.
- Outstanding puncture resistance, high breaking an tearing strength, with high peel strength on overlap joints.
- Chlorine free, plasticizer free, phthalate free. Environmentally friendly and safe for humans
- Excellent resistance to heat, UV and Ozone
- Flexible, fast and easy application
- Prevents lateral water migration and is resistance to high hydrostatic head.
- Continuous serviceability from -25ºC to 80ºC – without cracking, tearing or brittleness failure.

Technical Data

Chemical Base	HDPE sheet membrane with adhesive layer
Appearance	HDPE side – White Adhesive Side – Off White
Tensile Strength N/5cm (ASTM D412 mod)	≥ 25 MPa (film)
Elongation	≥ 500 % ASTM D412 mod
Adhesion in peel	≥ 1500 N/m ASTM D903 mod
Resistance to static puncture	≥ 1000 N ASTM E154
Joint peel resistance	≥ 1500 N/m ASTM D1876
Foldability at low temperature	Unaffected at -23 °C ASTM D1970
Water tightness	> 60 m of hydrostatic head ASTM D5385 mod
Ambient air temperature	+5 °C min. / +40 °C max
Substrate temperature	+5 °C min. / +40 °C max

Application Procedure

EQUIPMENT ▪ Measuring tape ▪ Marking pen ▪ Razor knife ▪ Scissors ▪ Pressure roller ▪ Clean lint-free cloth ▪ Metal straight edge for cutting ▪ Hot air gun
The substrate appliction surface must be smooth, uniform and clean with no standing water
Aquaproof HDPE PSA must be applied on a sufficiently stable substrate to avoid movement during the construction works. Large gaps and voids (≥ 12–15 mm) must be filled before membrane installation. Substrate can be damp or slightly wet. Suitable membrane fixing substrates include: ▪ Concrete blinding ▪ Formwork ▪ Rigid thermal insulation ▪ Plywood sheets / form ▪ Shotcrete ▪ Dimpled sheet drainage.
Installation method - General (For both Pre & Post Applied) After substrate conditions have been fulfilled, the waterproofing membrane is installed by loose laying onto horizontal / inclined substrates or fastening onto vertical substrates.

Longitudinal and transverse joints:
Side lap joints of Aquaproof HDPE PSA are sealed by overlapping the membranes by 80–100 mm and removing release liner in longitudinal direction. Transverse joints shall be sealed by removing the release liner and then overlapped by 80 mm. Use rollers to release air pockets within joints to ensure proper sealing and bonding. The selvedge adhesive can be heated by hot air gun to remove moisture or condensation and improve initial adhesion in cold conditions.

Concrete placement (Pre-applied):
The release liner must be removed just before the concrete placement or carefully before placement of reinforcement, ensure protection of contamination of adhesive. Place concrete directly onto or against the membrane within 21 days after installation. No mortar or protection screed must be used before placement of reinforcement and concrete.

Remove Formwork:
After removing the formwork, all penetrations such as shuttering anchors, any membrane damage and construction joints must be sealed using the appropriate FCSC products.

Backfilling protection:
After formwork removal and before backfilling, Aquaproof HDPE PSA must be protected with an appropriate protection sheet as soon as possible or at the latest within 21 days.

Packaging

Standard rolls are wrapped individually in a PE-foil
available in 1.2 mm & 1.5 mm thickness
Length = 20 m , Width = 1.2m

Storage & Shelf life

The product must be stored in original unopened and undamaged packaging in dry conditions and temperatures between +5 °C and +35 °C. Store in a vertical position. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage.

Limitation

Do not apply during rains or extreme temperatures. Avoid abuses which may lead to puncturing of membrane. Ensure that the product is applied at least 6 inches inside the drain pipe.

Note

All Technical Data Sheets of FIRSTCHOICE SPECIALITY CHEMICALS are updated on regular basis; it is the user's responsibility, to obtain the most recent issue. Field services where provided, does not constitute supervisory responsibility, for additional information contact our local representative.

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