

EDEN PU

UV Resistant Polyurethane Waterproofing Membrane

PRODUCT DESCRIPTION

EDEN PU is a single component (4th generation), UV resistant, innovative technology that is suitable for durable waterproofing of below/above grade concrete structures such as basement, foundations, terraces, roof gutters, retaining wall surface and can accommodate hairline cracks over applied substrate & tolerable movement thanks to its elastomeric jointless technology. It is an insulative reinforced Polyurethane elastomeric waterproofing membrane composed of high solids, 100% Polyurethane copolymer waterproof and anti-carbonation membrane coating technology, that can be applied over a large range of substrate type. EDEN PU contains specially selected additives to inhibit the growth of mold, resist bacterial growth and aggressive elements. It has embedded the latest ceramic micro technology which provides solar energy reflecting property enhancing cooling effect inside rooms, thus saving energy.

SPECIAL FEATURES

- ✚ Energy saving, heat insulating and acoustic dampening properties.
- ✚ UV resistant, user friendly and CO2 weathering resistance
- ✚ Very fast/easy to apply.
- ✚ 4th generation waterproofing and anti-carbonation membrane coating technology
- ✚ Environmentally safe and non-polluting, dirt pickup resistant.
- ✚ Forms high mechanical strength, elastic & resilient coating enabling it to accommodate slight structural movements.
- ✚ Higher tensile strength, tear resistance & bond strength with cementitious / primed substrate.
- ✚ No additional protective coating is required for roof deck subjected mild traffic.
- ✚ Features quick and easy fix of mechanical damages locally within minutes.
- ✚ Highly flexible accommodates movement and minor cracking of substrates.
- ✚ Retains flexibility through use of high grade 100% elastomeric polyurethane polymers.
- ✚ Low maintenance costs and Reduced energy cost due to heat reflectivity.
- ✚ Proven track record of excellence.
- ✚ Up to 25years service life offered.
- ✚ Excellent build properties enable application to both horizontal and vertical surfaces.
- ✚ Lightweight and no topping/additional coverage required.
- ✚ Can be applied to a wide range of substrates.
- ✚ Suitable for use on below / above grade structures.
- ✚ Equipped with the most recent jointless technology formulations.
- ✚ Does not support bacterial and Fungal growth

WHERE TO USE

EDEN PU is suitable for application in the following areas:

- ✚ Foundation wall and water-tank Waterproofing
- ✚ Waterproofing of Retaining Walls and Basements
- ✚ Waterproofing Under-tile in Bathrooms, Terraces, and Roof top areas etc.
- ✚ Roofs (flat and sloping), walls, ceiling deck, roof gutter and other wet areas Waterproofing.
- ✚ Waterproofing of bridges, commercial and industrial buildings, multi-story car parks and marine environments
- ✚ Waterproofing a variety of substrates including metals.

APPLICATION PROCEDURE

Stage-1: SURFACE PREPARATION & INVESTIGATIONS

A - Pre Substrate Investigation

- ✚ To further ensure durability and efficiency of membrane performance, substrate should possess a minimum compressive strength of at least 25MPa, and a cohesive bond strength of at least 1.5MPa.
- ✚ Check substrate for the presence of old loose coatings, dirt, oils, organic substances, existing membranes and dust. In any case of the existence of the above listed, adequate surface preparatory measures should be employed such as surface grinding by means of a grinding machine.
- ✚ Ensure new concrete structures is cured for at least 28 days.
- ✚ All visible surface irregularities and indentations need to be smoothed and evened out using EDEN reprofiling range of mortars



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B - Surface Preparation

- Careful surface preparation is essential for optimum finish and durability thus, surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. In order to achieve this, concrete surface must be mechanically profiled and prepared by shot blasting, sandblasting, water-jetting, scarifying, diamond-grinding or other engineering-approved method.
- Reference international concrete restoration institute (ICRI) CONCRETE SURFACE PROFILE (CSP) #3 standard for acceptable profile height. Maximum moisture content should not exceed 5%.

C - Post Substrate Preparation Investigation

- Any uneven or visibly loose pieces needs to be chipped off and perfected using EDEN reprofiling range of mortars to achieved an excellent smooth finish.
- Thoroughly remove any evidence of grinding dust Observe.

Stage-2: APPLICATION

A - Priming

Apply EDEN PU Primer to prepared substrate by roller or brush in one coat and allow to dry. Upon curing, some uneven balance may be observed due to the uneven smoothness of substrate, this will be properly coated upon completion of the minimum two coat application process. Allow primer coat to cure for at least 3 – 6 hours or once tacky and note that the curing rate is can be affected by the prevailing weather condition.

B - Application

Apply EDEN PU to prepared substrate by spray, roller or brush and ensure entire surface is uniformly coated leaving not puddle until entire surface is covered. A minimum of two coat is recommended while taking note of faintly applied areas for immediate additional coating. Any visible signs of entrapped air can be released by use of a spiked roller. Gradual spread over substrate to minimize/avoid air entrapment is highly recommended.

Trouble areas

Trouble areas such as wall- to-floor connections, 90°

degree angles, chimneys, pipes/pipe openings, waterspouts (siphon), duct, drainage, etc should be reinforced using a fabric material. Apply EDEN PU to the rightly sized fabric material to be used, ensuring it is fully saturated, then press in and dress the now soaked fabric material to the problem area.

Re-coat

Re-coat substrate once cured within 2 to 3 hours (As Observed) or once tacky. Note that this is dependent on application rate, effective sunlight accessed to the area and puddle concentrations.

C - Curing

EDEN PU is fast curing but will experience accelerated curing under direct sunlight. Generally, final curing time is within 6 – 12 hours and in unfavourable conditions without direct sunlight up to 24 - 48 hours may be required.

RECOMMENDATION:

Before Use

It is recommended that product is stirred well before using for at least 2-3 min. Check product seal to ensure it is unbroken or fake. Consult customer support should any concern arise for clarity and Technical support.

General

- Generally, the use of a reinforcing fabric material is recommended for better membrane strength where necessary.
- Use 5-10cm strip overlapping when using fibre material over very wide areas that would require joining.
- Re-coat after 8-24 hours, multiple layer coating gives strength to the membrane when finally cured.
- Apply multiple coat at demanding/troubled areas. A minimum of 3 coating is recommended.
- In a case where EDEN PU is to be covered with ceramic tiles or similar material with similar application process, oven-dry silica sand (corn-size 0.3-0.8mm) should be applied to saturate EDEN PU with the last coating layer application while still wet. This saturation will create an adhesion bridge to the tile adhesive that will follow



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TECHNICAL PROPERTIES

<i>Packaging</i>	5kg, 20kg	<i>Concealed Bucket</i>
<i>Shelf life</i>	12 months minimum from date of production	<i>If stored properly in original, unopened and undamaged sealed packaging.</i>
<i>Appearance</i>	Grey	<i>Default colour (Greyish Viscous liquid)</i>
<i>Solid content by weight</i>	> 89 %	
<i>Density</i>	~1.5 kg/l	
<i>Resistance To Water pressure</i>	No Leaks	(DIN EN 1928)
<i>Resistance to Mechanical Damage by Static impression</i>	High Resistance (Class:P3)	(EOTA TR-007)
<i>Resistance to Mechanical Damage by dynamic impression</i>	High Resistance (Class:P3)	(EOTA TR-006)
<i>Adhesion to concrete</i>	>2.0 N/mm ² ASTM D 903	ASTM D 903
<i>Resistance to Root Penetration</i>	Resistant	(UNE 53420)
<i>Solar Reflectance (SR)</i>	0.85	(ASTM E903-96)
<i>Thermal Resistance (780C for 90days)</i>	Passed -No outstanding changes	(EOTA TR – 011)
<i>Tensile strength</i>	>6.5N/mm ²	ASTM D 412
<i>UV accelerated aging, in the presence of moisture</i>	Passed -No outstanding changes	(EOTA TR – 010)
<i>Construction Material Fire Class</i>	B2	(SIN 4102 – 1)
<i>Chemical Properties / Resistance</i>	Good resistance	<i>Against acidic, seawater, detergent & oils.</i>
<i>Bonding strength</i>	>2.1N/mm ²	ASTM D 412
<i>Tear Strength</i>	~8 N/mm ²	ASTM D624
<i>Permeability to Water Vapor</i>	Nil penetration	ASTM E 96
<i>Elongation</i>	>500 %	ASTM D412
<i>Permeability to Water Vapor</i>	Nil penetration	ASTM E 96
<i>Heat Reflectance</i>	80% reflection of solar energy	(Greyish) EDEN PU
<i>Initial Cure Time at 25°C</i>	Full cure after 2 to 6hrs	<i>Depending temperature</i>
<i>Rain Stability Time</i>	3-5 hrs	(Condition: 200C, 50% RH)



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APPLICATION INFORMATION

<i>Full Cure Time at 25°C</i>	5 - 7 Days	<i>Dependent on application rate, effective sunlight accessed to the area and puddle concentrations. Depending on application rate and style Depending on application rate and style (As Observed) (Condition 200C, 50% RH) (with reinforcement) (without reinforcement) (Condition 200C, 50% RH) Protect from direct sunlight and frost DFT of 400 microns (in 2 coats min) required. (Dependent on substrate porosity).</i>
<i>Re-coat time</i>	2 to 3 hours (As Observed)	
<i>Minimum Time To Re-coat</i>	2 hours	
<i>Maximum Time To Re-coat</i>	24 hrs	
<i>Drying Tack Free</i>	2-3 hour	
<i>Light Pedestrian Traffic Time</i>	18 – 24	
<i>Service temperature</i>	-10 °C min. / +80 °C max. -5 °C min. / +80 °C max.	
<i>Final Curing Time</i>	7 Days	
<i>Storage condition</i>	Store in dry conditions in original packaging at temperatures between +5 °C and +30 °C.	
<i>Theoretical Coverage</i>	20m ² (minimum) – 25m ² (maximum) stretch	

CAUTION

- ✚ Do not over coat/puddle with EDEN PU.
- ✚ EDEN PU is recommended for use only as described in the Uses section of this data sheet.
- ✚ Be careful to observe written instruction on all

technical documents for this product such as *Safety Data Sheet, Method Statement Data Sheet, Technical Data Sheet, and Test Certificate Results.*

- ✚ Application in cooler temperatures may require extra curing time.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY HEALTH AND SAFETY

Information on the safe handling, storage and disposal of chemical products, user is advised to refer to the most recent/updated *Safety Data Sheet, Method Statement Data Sheet, and Technical Data Sheet*, containing physical, ecological, toxicological and other safety/handling/storage related data.

CLEAN UP

Wash hands and tools with EDEN super cleaner or any of EDEN recommended cleaning products promptly before the material hardens. Cured material must be mechanically removed.

TECHNICAL SUPPORT

AISE-OHIS EDEN CONSTRUCTION (CHEMICALS) Ltd provides a technical advisory service supported by a team of specialists in the field.



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STORAGE AND SHELF LIFE

- ✚ EDEN PU can be stored up to 12 months minimum from date of production if stored properly in original, unopened and undamaged / sealed packaging.
- ✚ EDEN PU is supplied in 5kg, & 20kg buckets.
- ✚ Storage area should be in dry conditions and in original packaging at temperatures between +5 °C and +30 °C.
- ✚ Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, and batch number and application precaution labels.

STANDARD COMPLIANCE

Conforms to EN 1489-2007, ASTM D-968

HEALTH & SAFETY

- ✚ Please ensure that hand gloves and goggles are worn during installation
- ✚ Apply in ventilated areas, away from flames
- ✚ It is only important that during application and after application, standard safety procedures are done.

- ✚ Please consult current MSDS for product.
- ✚ For Professional Use only.

ADDITIONAL INFORMATION

AISE-OHIS *EDEN CONSTRUCTION (CHEMICALS) Ltd* manufactures a complete range of construction chemical products which include:

- ✚ Cementitious Waterproofing membrane
- ✚ Acrylic Waterproofing membrane
- ✚ Polyurethane Waterproofing membrane
- ✚ Bituminous Waterproofing membrane
- ✚ Flooring solution
- ✚ Damp-Proofing products
- ✚ Repair and refurbishment systems
- ✚ Water-stop
- ✚ Cleaning agent
- ✚ Bonding agents
- ✚ Decorative / Reprofiling mortars
- ✚ Tile adhesive and grouts

For more information on any of our products, please contact AISE-OHIS *EDEN CONSTRUCTION (CHEMICAL) Ltd* global or regional office

LEGAL NOTE

Details contained in this Technical Data Sheet is provided in good will based on the experience and knowledge of the products been stored, handled and applied properly under normal conditions. That client will be responsible to duly follow all instruction written herein. However, Whilst Aise-Ohis *Eden Construction (Chemicals) Limited* endeavors to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it. Therefore, user is mandated to check/test product's suitability for the intended application and purpose. Aise-Ohis *Eden Construction (Chemicals) Limited* reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.