

EDEN SP PLASTICIZER 20

Multi-purpose Anti-crack Waterproofing Admixture For Mortar And Concrete

PRODUCT DESCRIPTION

EDEN SP Plasticizer 20 is an expertly engineered liquid anti-crack solution, functioning as an integral and general waterproofing admixture. It effectively minimizes water permeation through concrete, mortar, and screed by enhancing their waterproofing properties. Tailored for the comprehensive and enduring waterproofing of mass and reinforced concrete structures, including ready-mixed and precast concrete components, this product ensures top-notch performance. Its versatile applications encompass a wide array of areas such as wall plasters, foundations, piles, water-retaining structures, manholes, sewage treatment plants, swimming pools, and septic tanks, making it an ideal choice for various construction needs.

SPECIAL FEATURES

- ✚ Proven record of performance
- ✚ Suitable for interior and exterior applications.
- ✚ Improves adhesion to substrates.
- ✚ Excellent resistance to abrasion, and increased durability and toughness.
- ✚ Non-toxic
- ✚ Similar thermal expansion and modulus properties to concrete (unlike resin mortars and primers).
- ✚ Effectively enhances building durability by reducing permeability in concrete, plaster, and screed.
- ✚ Unlike typical coatings, EDEN SP Plasticizer 20 integrates seamlessly into plaster or concrete during mixing, becoming an intrinsic component of the material. This integration ensures continuous waterproofing protection even in the event of surface damage.
- ✚ Significantly reduces the formation of shrinkage cracks in concrete and plaster, particularly in high-temperature conditions.
- ✚ Improves the workability of concrete/screeding mortars during placement, thus enhancing overall construction efficiency.
- ✚ Enhances the compressive strength of concrete, leading to a more robust and resilient structure.
- ✚ Safeguards reinforcement bars by preventing Alkali-Silica Reaction (ASR) attacks, ensuring long-term structural integrity.
- ✚ The use of EDEN SP Plasticizer 20 allows the reduction of water cement ratio by about 10% without affecting workability.

- ✚ Water retaining structures
- ✚ All concrete, Mortar, Plastering and Screed.
- ✚ As a complimentary protection in the Screeding of terraces, Balconies, Water tank and Roof Gutters & Terraces Areas.

APPLICATION PROCEDURE

Stage-1: SURFACE PREPARATION & INVESTIGATIONS

A - Pre Substrate Investigation

- ✚ To further ensure durability and efficiency of product 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, fats, 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.

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 screed/concrete. 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.

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 Observed.

WHERE TO USE

EDEN SP Plasticizer 20 is suitable for application in the following areas:

- ✚ Foundation
- ✚ Swimming pool
- ✚ Septic tank



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Stage 2 – (Mixing)

Take care to thoroughly pre-mix the sand/aggregate with the cement then add EDEN SP Plasticizer 20 to the mix while stirring slowly by (recommended) mechanical means.

Dosage Recommendations

As a Waterproofing Agent in screed/mortar:

A screed mix ration of (1) part cement to (3) part sand is recommended and a 0.5kg – 0.75kg of Eden SP Plasticizer 20 per bag of cement is recommended.

NOTE:

- ✚ Dose Eden SP Plasticizer 20 at 0.75kg – 1.5kg per bag of cement for screed mix ration beyond (1) part cement to (4) part sand.
- ✚ Mix by mechanical means but if mix manually, ensure proper screed/mortar homogeneity is achieved.

Stage 3 (Application)

As a Waterproofing Agent in screed/mortar:

In order to obtain a smooth consistency screed/mortar, the cement and sand must be dry mixed and then poured into the calculated/measured c/w ratio to be used (already mixed with Eden SP Plasticizer 20).

In a case of manual mixing ensure that Eden SP Plasticizer 20 is well broad-casted over mixed screed material (sand & cement).

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

- ✚ Ensure that all aggregate are free from humus and slit (Organic) content, as this can have deleterious effects.
- ✚ A waiting time of 2mins is recommended when a mechanical mixing method is used to allow for the escape of entrapped air bubbles.
- ✚ Better result will always be archived when EDEN SP Plasticizer is first dissolved in calculated amount of mixing water, however it can still be applied raw to the aggregate during mixing.
- ✚ For large insitu-casting project, the use of a standard

grain sieve is recommended to achieved uniform aggregate particle sizes and reed off contaminants.

CAUTION

- ✚ Ensure container used for mixing are clean and dry.
- ✚ Use of wet aggregate may result in excessive workability.
- ✚ Unless otherwise stated, typical properties are based on a 1:3 cement/sand mix in which 0.5liter-0.75liter of EDEN SP Plasticizer 20 per 50kg of type I OPC cement has been incorporated.
- ✚ Variation in cement used and workability can give increased strengths.
- ✚ Protect EDEN SP Plasticizer 20 from direct sunlight
- ✚ EDEN SP Plasticizer 20 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 and in higher temperature can experience accelerated curing.

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 (CHEMICAL) Ltd provides a technical advisory service supported by a team of specialists in the field.



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TECHNICAL PROPERTIES

<i>Packaging</i>	5liters, 10liters, 15liters, & 20liters	<i>Kegs</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>	Brownish liquid	<i>Viscous</i>
<i>Solid content by weight</i>	~ 45 %	
<i>Spg</i>	~1.1	
<i>Compressive strength</i>	≥18MPa @ 3days	<i>ASTM C109 (Observing good concreting practice)</i>
<i>Tensile strength</i>	≥3.1MPa @ 7days	<i>ASTM C190 (Observing good concreting practice)</i>
<i>Substrate Temperature</i>	+5 °C min. / +35 °C max	
<i>Bond strength</i>	3.4MPa	<i>ASTM C-882)</i>
<i>pH</i>	5.5 - 6.5	
<i>Chloride content</i>	≤ 0.1%	<i>Negligible</i>

APPLICATION INFORMATION

<i>Initial bond strength time</i>	15-20 minutes	<i>Dependent on application rate, effective sunlight accessed to the area and puddle concentrations. Protect from direct sunlight and frost</i>
<i>Initial bond strength temp</i>	25°C - 30°C.	
<i>Storage condition</i>	Store in dry conditions in original packaging at temperatures between +5 °C and +30 °C.	
<i>Mixing Methodology</i>	Mechanical	
<i>Ambient Air Temp</i>	+5 °C min. / +40 °C max.	

STORAGE AND SHELF LIFE

- ✚ EDEN SP Plasticizer 20 can be stored 12 months minimum from date of production if stored properly in original, unopened and undamaged / sealed packaging.
- ✚ EDEN SP Plasticizer 20 is supplied in 5kg, & 20kg buckets.
- ✚ Storage area should be free from moisture and direct sunlight.
- ✚ 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 the requirements of ASTM E514-90

HEALTH & SAFETY

- ✚ Please ensure that hand gloves and goggles are worn during installation.
- ✚ Apply in ventilated areas, away from flames



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- ✚ 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 (CHEMICAL) *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 agent
- ✚ Decorative / Repair mortars
- ✚ Tile adhesive and grouts

For more information on any of our products, please contact AISE-OHIS EDEN CONSTRUCTION (CHEMICAL) 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.

