

# EDEN REFINE MORTAR 40

Heavy Duty Structural Concrete Patch / Repair Mortar

## PRODUCT DESCRIPTION

EDEN REFINE MORATR 40 is a advanced heavy-duty high strength gain structural reprofiling mortar. Owing to its low water requirement EDEN REFINE MORATR 40 can be employed for use for both interior and exterior concrete surfaces, and for general repair of structural cracks and holes. It is a redefined, Polymer Modified high strength patching material suitable for easy re-profiling of concrete indentations, holes and horny combs on concrete surfaces, sand/cement/ screed or concrete bases. Can be employed to treat cracks up to 10-100mm in width.

## SPECIAL FEATURES

- ✦ Heavy duty structural reprofiling repair mortar.
- ✦ Can be applied by trowel, roller and airless spray machine.
- ✦ Fast setting Polymer modified structural repair / reprofiling mortar
- ✦ Can be used to easily fix / reprofile hairline cracks.
- ✦ Suitable for use on below ground structures.
- ✦ Fast curing and easy to apply
- ✦ Sufficient resistant to direct water penetration due to its well grid particle nature.
- ✦ Good bond/adhesion strength owing to its polymer modified properties.
- ✦ Good tolerance to domestic chemicals such as detergents.
- ✦ Excellent early strength gain.
- ✦ No pollution to environment.
- ✦ Modified cement polymers thus able to form thin film when used for reprofiling works on walls and floors.
- ✦ Improves compressive strength and durability.
- ✦ Features strong bonding adhesiveness and low shrinkage.

## WHERE TO USE

EDEN REFINE MORATR 40 is suitable for application in the following areas:

- ✦ Patching and repair of masonry blocks, curbs, steps, sidewalks, and more, both for external and internal purposes.
- ✦ Used as plaster on walls and panel system.
- ✦ Widely used on highway, fly-over, concrete constructions on the sea, new and old buildings.
- ✦ Can be used in patching in-situ or precastbeams, columns and walls.
- ✦ Ideal for restoration of honeycombed, spalled or otherwise damaged concrete

- ✦ It may be used for flatwork,
- ✦ It may be applied for mass or thin-set repairs.

## 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, 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.
- ✦ Ensure new concrete structures is cured for at least 28 days.

#### 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 mortar. In order to achieve this, concrete surface must be mechanically profiled and prepared by chiselling out any loose concrete, and all closed cracks are to be opened.
- ✦ Substrate should be SSD (Surface Saturated Dry), this will aid to prevent quick drying out of mortar when applied to substrate.

#### C - Post Substrate Preparation Investigation

- ✦ Any uneven or visibly loose pieces needs to be chipped off and perfected using EDEN reprofiling





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range of mortars to achieved an excellent smooth finish.

- ✚ Thoroughly remove any evidence of grinding dust or chipping particles observe.

**Stage-2: APPLICATION**

**A - Priming**

EDEN LATEX or EDEN SUPA-LATEX can be used as a primer to prepared substrate. This can be applied to prepared substrate by roller or brush in two coat and allowed to dry. Patching mortar should be applied to primed substrate once tacky. Please note that priming is optional and product application to SSD substrate will still be effective.

**B - Mixing**

EDEN REFINE MORATR 40 must be thoroughly mixed using a low speed electric stirrer (300- 400rpm) or other suitable equipment. Prior to mixing, measure out 4.4 – 4.6 liters of water or 3:1 to 4:1by volume. Stir mechanically while adding EDEN REFINE MORATR 40 to the mix. Mix continuously for 2 minutes minimum until a uniform homogenous slurry has been achieved. Always ensure to follow the standard practice of pouring powder to liquid.

**C - Application**

Apply EDEN REFINE MORATR 40 to prepared substrate by roller, spraying equipment, or trowel. Ensure entire surface is uniformly coated leaving no air entrapments. Gradual spread over substrate to minimize/avoid air entrapment is highly recommended. Product should not be applied under active rain pour.

**Trouble areas**

Trouble areas can be reinforced using a fabric material. Apply EDEN REFINE MORATR 40 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.

**C - Curing**

EDEN REFINE MORATR 30 has good curing time but will experience accelerated curing under direct sunlight. Generally, It is important to protect EDEN REFINE MORATR 40 against rapid drying from exposure to direct sun ray, extreme temperatures or wind, hence curing by means of a curing compound is recommended.

**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 at troubled areas.
- ✚ Use 5-10cm stripe overlapping when using fibre material over very wide areas that would require joining.

**TECHNICAL PROPERTIES**

<i>Packaging</i>	5kg, & 20kg pack	<i>Powder</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>	Greyish	<i>Grey appearance when mixed.</i>
<i>Mix Ratio</i>	4.4 – 4.6 liters of water or 3:1 to 4:1by volume.	<i>Mix by Mechanical means.</i>
<i>Pot Life</i>	Approximately 35-60minutes	<i>Under normal conditions</i>
<i>Density</i>	~2.1 kg/L	



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Compression strength	>35 - 42N/mm <sup>2</sup> @ 7Days	ASTM C 109
Adhesion to substrate	>1.5N/mm <sup>2</sup>	ASTM D4541
Permeability to Water	Negligible (less than 0.1mm)	
Application Tolerance temp.	> +5°C	Minimum

## APPLICATION INFORMATION

Cure Time	24 hrs minimum for initial curing	
Water Ratio	4.4-4.6litres of water per 20kg bag of product	
Initial Setting Time	Approx. 25 minutes	Depending on application rate and style
Final Setting Time	Approx. 25 - 60 minutes	Depending on application rate and style
Storage condition	Store in dry conditions in original packaging at temperatures between +5 °C and +30 °C.	Protect from direct sunlight and frost
Coverage	Approximately 1.2 – 1.5 kg per m <sup>2</sup> per 1 mm thickness.	(Note: The figure above does not take in to account surface profile, porosity or material waste, thus variation in actual site results can be expected)

### CAUTION

- ✚ EDEN REFINE MORATR 40 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* for Further details on Environmental Health and Safety.
- ✚ Application in cooler temperatures may require extra curing time before the installation of additional coverings.
- ✚ Do not add water to dilute the material
- ✚ Coverage is changeable depending on the application type, surface porosity, surface profile, variation in level or wastage etc. it is recommended that at least 3 layers are applied.

### 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.

### STORAGE AND SHELF LIFE

- ✚ EDEN REFINE MORATR 40 can be stored 12 months





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minimum from date of production if stored properly in original, unopened and undamaged / sealed packaging.

- ✚ EDEN REFINE MORATR 40 is supplied in 5kg & 20kg Bag.
- ✚ Storage area should be free from direct sunlight rays.
- ✚ Storage area should be free from moisture and rain.
- ✚ Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, and batch number and application precaution labels.

## STANDARD COMPLIANCE

ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars  
ASTM C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete  
ASTM C191 Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle

## 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 (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.

