



**IMPERMAX**

**SINGLE COMPONENT  
WATERPROOFING MEMBRANE  
BASED ON POLYURETHANE**

**INSTALLATION MANUAL**

**Krypton Chemicals**

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# **RULES OF DESIGN AND APPLICATION METHODS**

## **1 TRANSPORT AND STORAGE**

### **1.1 Storage temperature**

+15 to +30 °C. NOTE: in Winter months, it is recommended to keep product at 15 to 20°C especially before using the product, in order to reduce its viscosity and ease application.

### **1.2 Packaging**

Cans of 5, 10 and 25 Kg. Once a container is open, it is recommended to use its content totally.

### **1.3 Caution**

IMPERMAX contains flammable ingredients. Please read the Material Safety Data Sheet carefully before handling the product.

## **2 INFLUENCE OF ATMOSPHERIC CONDITIONS**

### **2.1 Temperature**

It is not recommended to apply product at temperatures below 5°C. Where application is at such temperatures or below, it is imperative to use PUR Cat Additive. It is not recommended to apply product at temperatures above 35°C, or on hot supports.

### **2.2 Humidity**

Do not apply product on humid / wet surfaces, or which contain more than 4% humidity. Where application is under such conditions, pre-preparation of the support with HUMIDITY PRIMER (see product data sheet) is necessary.

### **2.3 Weather**

In case of rain just after application, IMPERMAX will not mix with water (emulsify) but there may be marks due to impact of water drops, which will disappear with a final coat. Wind may carry dust particles, leaves, etc. which may adhere to the membrane and affect the aesthetics of the application.

## **3. APPLICATION OF COMPONENTS: INSTALLATION INSTRUCTIONS**

### **3.1 Appropriate supports**

Product may be applied on almost any surface commonly used in construction (concrete, mortar, brick, etc). It is also suitable for repairs and maintenance on tile, ceramics and mosaics. Adhesion is not good on new asphalt, product does adhere on aged asphalt and bitumen.

### **3.2 Surface condition**

Supports onto which product is applied must be dry, clean and without any impurities which might affect adhesion (dust, dirt, grease, etc). If there is suspicion of humidity under tiles or in the support, conduct this simple test; cover the surface with plastic film, and attach it to the substrate with adhesive tape. If, after a few hours, there is condensation in the plastic sheet, it will be necessary to apply Humidity Primer on the support.

### **3.3 Support preparation.**

#### **3.3.1 CLEANING**

It is very important to clean the surface prior to conducting repairs on existing roofs, paying particular attention to those areas where particles may be present. One good system is to use high pressure water jets (adding acids and surfactants to the wash water, improves effectiveness). It is imperative to rinse afterwards and to allow the surface to dry properly before applying IMPERMAX. In cases of new construction, one must eliminate all loose traces and residues of building materials and clean the surface thoroughly. Always ensure sufficient time after cleaning so the support does not have any traces of humidity when application commences.

#### **3.3.2 HUMIDITY CONTENT**

It is not recommended to apply IMPERMAX membrane directly on supports which may contain humidity, either on the surface or trapped underneath. Humidity provokes two important problems in treatments made:

A. Lack of adhesion (if the support is saturated with water)

B. Appearance of blisters in the surface of the membrane (due to the vapour pressure generated as the area is exposed to sunlight, which deforms elastic materials).

In case of humid supports, or if there is suspicion of humidity, it is imperative to pre- treat the area with HUMIDITY PRIMER.

#### **3.3.3 LEVEL SUBSTRATE (SUPPORT)**

As IMPERMAX is a self – levelling product, it is important to apply it on totally even, stable and firm supports which are as level as possible so that depth of the membrane is uniform. It is essential to avoid the accumulation of product in deeper areas, and too little product in

elevated zones. In order to obtain a uniform and regular surface, there should not be peaks in the surface greater than 2mm high. If there is excessive variation in height, it is important to prepare the support properly by using self-levelling cement mortars (Rayston Level), or filling the joints and holes with the same product (IMPERMAX), combining it with mineral fillers (particle size 0,08 to 0,315 mm) or compatible materials (i.e. Polyurethane sealants – NEVER SILICONES).

#### **3.3.4 VERTICAL /STEEP SURFACES**

If the product is applied on vertical or steep supports, it is important to use THIXOTROPY ADDITIVE, so the product will not “drop” thus ensuring enough thickness in the membrane. Also, on vertical/steep supports, which are to be covered with tiles, it will be necessary to attach mineral granules of a certain particle size (min. 0,9 mm in diameter), on the final coat of membrane while it is sticky, in order to obtain enough roughness and compatibility between the membrane and cement.

#### **3.3.5 ABSORPTION,**

Substrates/supports must have porosity to enable the IMPERMAX to bond, however measures must be taken if a substrate is too porous or impervious. On roofs made from concrete slabs, if possible, it is recommended to apply a layer of mortar.

On rough and porous substrates, it is recommended to apply a first coat of product diluted with RAYSTON solvent (adding approx. 10% solvent). This prevents a large part of the first coat being absorbed into the concrete and avoids air being trapped between the support and the membrane, which may cause bubbles and defects afterwards. Never apply product in heat.

If the substrate is waterproof and has no porosity at all (i.e. ceramics, tiles, glass, aluminium, etc.) the high cohesion of this product may result in a lack of adhesion on these surfaces. This may result in peeling of the membrane if it is accidentally perforated. In this case it will be necessary to initially apply PU PRIMER, to improve the chemical bond between the substrate and the membrane.

#### **3.3.6 TEMPERATURE**

Since IMPERMAX is a liquid product, it is important not to apply it directly onto hot supports or supports which are directly exposed to sunshine, especially in the summer months, since this may cause the following defects/problems in the waterproofing treatment:

- A: Ascending air stays trapped in the membrane while it is liquid, causing bubbles.
- B: There is a very fast formation of skin in the surface, which blocks degassing of the product, so solvents may not evaporate evenly.

For this reason, in the summer months it is important to apply product early in the morning or late in the evening and, in general, avoid applying product in hours of strong sunshine.

### **3.3.7 FISSURES.**

When applying product on existing roofs, or conducting repairs and maintenance, it is important to treat properly any existing fissures which need repair.

These fissures must be treated by wetting the substrate with a first coat of IMPERMAX and while it is fresh laying GEOMAX 30cm on top. After a few hours, apply a final coat of IMPERMAX, so that the GEOMAX layer is totally saturated.

### **3.3.8 JOINTS.**

Treatment of expansion joints must also be done by laying GEOMAX 30 cm on a first coating of IMPERMAX, in the direction of the already filled joint (with Polyurethane Sealant), and finally saturating this GEOMAX with enough quantity of IMPERMAX.

### **3.3.9 WATER EVACUATION PIPES/GULLEYS.**

In order to ensure total continuity of the membrane, these elements must be installed on a first layer of product while it is still fresh and a second coat is subsequently applied to ensure the integrity of the membrane.

## **3.4 Definition and consumption of different primers for each substrate.**

### **3.4.1 POROUS SUBSTRATES**

(Mortar, red concrete, cement, brick, etc.). It is recommended to apply a first coating as **porosity sealer** of IMPERMAX diluted with approx. 10% of RAYSTON solvent. Never apply under direct sun or heat. This priming can be by roller, evenly spreading the product so that it penetrates, saturates and seals pores. The quantity of product to apply at this stage is approx. 0,5kg / m<sup>2</sup>. It is important to wait until this first coat is dry before applying the second coat. Any bubbles appearing may produce weak spots in the membrane or poor aesthetics so they must be burst (spiked roller).

### **3.4.2 NON POROUS SUBSTRATES**

(Ceramics, tiles, glass, aluminium, steel, etc.). It is important to use **PU PRIMER** in order to obtain bonds between the substrate and the membrane. The quantity of PU Primer should be approx, 200 to 300 g/m<sup>2</sup>. Leave for between 2 hours and a maximum 4 hours, between application of PU Primer and IMPERMAX.

### **3.4.3 HUMID SUBSTRATES**

(Wet or with humidity underneath tiles). It is imperative to apply **Humidity Primer**, so that it acts as a barrier to vapour pressure which will emanate from the support. The quantity of Humidity Primer is between 100 and 300 g/m<sup>2</sup>, or until there is a hard, shiny, homogeneous film on the support. The cure time for this product (at 20°C) is approx. 4 hours.



### **3.5 Application methods, order of application and finish coatings**

IMPERMAX waterproofing system may be applied manually (roller, spreader, brush) or by machine (airless machine). It is important to prepare the product carefully, following some safety and quality precautions:

#### **3.5.1 OPENING**

Open containers carefully, ensuring joint pieces do not fall in the product.

#### **3.5.2 MIXING**

Mix / homogenize product with the help of a low rpm electrical mixing machine for a few minutes, taking care to minimise the amount of air introduced to the product, and homogenizing the whole content in one can.

#### **3.5.3 ADDITIVES**

Add the appropriate additives. (Accelerant, Thixotropy, Solvent, etc.).

NOTE: in case of diluting the product, do not add more than 10% solvent (ideally 5%), since this has a direct negative effect on the final elasticity of the membrane. NEVER USE SOLVENTS WHICH ARE NOT APPROVED FOR USE WITH POLYURETHANES, OR WHICH MAY CONTAIN ALCOHOLS (METHANOL / ETHANOL etc.).

Mix additives with the resin until blended totally evenly. Wait a minimum of 3-5 minutes to allow evacuation of any air introduced during mixing, or wait until the Thixotropy additive has thickened the product.

#### **3.5.4 APPLICATION**

Apply the necessary amount of product per layer, measuring the surface to be covered per container of product (i.e. 5 X 5 m area for every 25 Kg container). Since this product intentionally does not contain a high quantities of mineral fillers (which do not provide mechanical strength) and is self levelling, it is important to apply a considerable quantity to obtain a depth ie., 0.8mm depth requires 1.0kg/m<sup>2</sup>.

NOTE: Surplus product can be saved by transferring it into a smaller container, to minimise the quantity of air in contact with the product. Once closed, turn the container upside down, so that the product seals any small air holes in the packaging. Note this is not possible if Super Accelerant, or Thixotropy agents have been added.

#### **3.5.5 PREPARATION**

Before applying IMPERMAX on any surface, it is important to prepare the edges of this area so it does not interfere with the membrane. Edges and laterals must be coated with a first layer of IMPERMAX of approx. 0,8 Kg/m<sup>2</sup> (equivalent), both for the floor as well as the wall area , covering 10 cm on the floor and 20 cm on the wall (vertical areas require Thixotropic Agent). Next, on this initial wet coat of product apply a layer of GEOMAX 30cm. The surface will then be ready to be coated with the first and second coats of membrane.

### **3.6 Application methods**

#### **3.6.1 ROLLER**

The main goal when using a roller with IMPERMAX is to spread the product evenly. Do not use rollers as if “painting” the product, since this will result in a very thin layer of product. Use short fibre rollers, to avoid retention of too much product and weight which requires more effort to move around. When using the roller, apply the product in several layers (i.e. 3 coats of 0.7 Kg /m<sup>2</sup> each) in contrasting colours. This is necessary to obtain sufficient thickness (minimum 1.6 mm) and to have good aesthetics, ensuring the final properties of the product are free from bubbles and trapped air. If necessary, use a spiked aeration roller to avoid air being trapped in the membrane and help break bubbles.



#### **3.6.2. SPREADER**

Application by spreader is recommended to order to obtain final thickness in only one layer (approx. 1,5 – 2 Kg/m<sup>2</sup>). With this method, It is important to take special precautions to avoid air bubbles forming in the membrane. A primer must be applied, which can either be a first coat of IMPERMAX diluted with approx. 5 -10% solvent, or a coat of Humidity Primer. This avoids bubbles forming due to existing air in porous supports rising through the membrane. If bubbles are generated in the primer, it is important to break them before proceeding to the waterproofing layer. Never apply a thick coat of IMPERMAX on a porous substrate while it is hot and exposed to direct sunshine.



Once the first layer (primer) is cured, apply the main waterproofing layer of approx. 1.5 – 2 Kg/m<sup>2</sup>, mixing with SUPER ACCELERANT (1,5 L / 25 Kg of IMPERMAX). Spread the product with a toothed spreader of approx. 3.2 mm in height, and width 28 cm. The toothed spikes in the blade must be triangular, to minimise marks on the surface, and to assist in the self-levelling of the product. The product must be spread gently to avoiding the creation of bubbles.



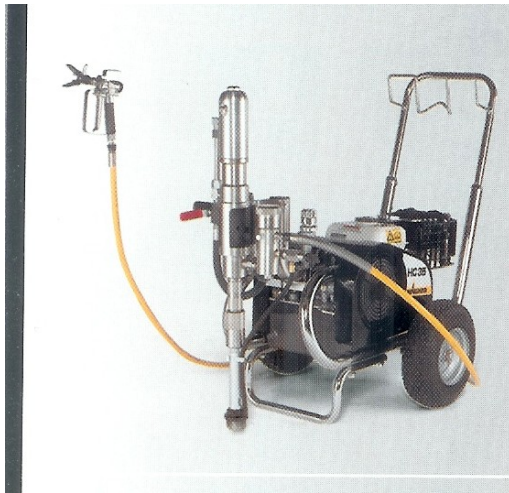
NOTE: the use of Super Accelerant helps to obtain a high performance membrane very quickly (even at temperatures below 0°C), and free from imperfections. The only drawback here is that the use of this additive together with light coloured membranes (white, grey, etc.) alters the colour (yellowing), so it is only recommended as a final coat in combination with Dark or Light Red. In case of use with grey or white as a final coat, the top coat should be Impertrans combined with the appropriate colour.

Finally, and before the product will form a skin, it is recommended to use the spiked aeration roller, eliminating residual bubbles which may have come up during mixing or application of the product, and obtaining an even, homogeneous finish.

### **3.6.3 SPRAY APPLICATION BY AIRLESS MACHINE**

In projects involving a big surface, it is recommended to use spraying machines with the Airless systems, with the following advantages:

- Fast application.
- Easy spread product (especially in steep / vertical supports using Thixotropy additive).
- Excellent quality and homogeneity in the film obtained (if the application is made according to the criteria outlined).



It is also very important to prepare the surface carefully before spraying. (Porosity primer applied by roller, diluting product by approx. 10% with Rayston solvent and Humidity primer if support is wet or contains humidity).

If product is applied on vertical or steep supports, it is important to use Thixotropy Additive (1 Kg/ 25 Kg of IMPERMAX), and to wait 3 – 5 minutes before application.

It is also advisable to use Super Accelerant, especially in the case of low temperatures (below 15°C), taking into account that this product combined with light colour membrane (grey / white) yields a very yellow finish, so it is important to either cover the membrane with tiles or with a final topcoat in Impertrans or Colodur.

The minimum requirements for a machine that is capable of handling IMPERMAX without almost any dilution of the product are:

Technical Data:

Power	3.1 KW (230V)
Pressure .....	228 bar
Weight	83Kg
Maximum throughput	6,6 l/min
Throughput at 120 bar	5,6 l/min
Nozzle maximum size	0,052"
Nozzle model	427

It is also recommended to work with a filter o 50 μ, at the machine, and not at the nozzle.

### **3.7 Finishing**

In order to improve the aesthetics or performance of the product, it is possible to provide the following top coats:

#### **3.7.1 TILES ON TOP OF MEMBRANE**

Due to the high puncture resistance of this system (a value of P3, according to EOTA TR7 static indentation test), it is possible to cover the product directly with tiles, without any special reinforcement or protection. It is, however, very important and recommended to protect the surface during works with a geotextile, so there is no accidental puncture by stone chips, or other materials.

#### **3.7.2 COLODUR FINISH**

To obtain a better resistance to traffic (pedestrian), it is recommended to apply a final coat of COLODUR 40% (Aliphatic Single component rigid Polyurethane), either transparent or coloured.

#### **3.7.3 HEAT REFLECTIVE FINISH**

In certain cases, it is important to apply a final coat of IMPERTRANS 40% (Aliphatic single component elastic Polyurethane), combined with heat reflecting colours (i.e. white). This has some effect on the maximum temperature obtained in the building during summer months.

#### **3.7.4 DECORATIVE FINISH**

By applying a layer of IMPERTRANS 60% on top of the membrane, and as the binding agent for coloured/natural granules (imitating quartz), it is possible to obtain a decorative, resistant finish, with anti-skid properties. To achieve this finish, apply a layer of Impertrans 60% at 0,4 Kg/m<sup>2</sup>, followed by 3 - 3.5 Kg/ m<sup>2</sup> of granules (in the desired colour), of granulometry 0,4-0,9 mm. After 6 hours, excess granules (which are not bonded to the resin underneath) may be brushed away. It is possible to brush away the excess of granules (which are not). This finish may be left as anti-skid, or polished (with the appropriate machine), to obtain a smooth surface. Finally, it is necessary to apply a final top coat of COLODUR 60% (0,5 Kg/ m<sup>2</sup>, applied with a plastic spreader) to seal the finish and preserve its integrity and avoid dirt adhesion.

#### **3.7.5 ANTI-SKID**

It is also possible to apply a final coat of IMPERTRANS 40% + RAYSTON Anti-Slip additive, as an easy, quick and economic way to improve the anti-skid behaviour of this system.

### **3.8 GEOMAX reinforcement**

GEOMAX is a special tissue, made from synthetic fibres, specifically designed to work with IMPERMAX membranes (and their high elasticity). It is perfect for areas requiring additional protection or reinforcement, MINIMISING THE SELF LEVELLING EFFECT of these products, and increasing the final thickness of the membrane obtained



#### **3.8.1 MAIN ADVANTAGES:**

- GEOMAX is 100% compatible with solvents and easily “wet”.
- Flexible and easily adapts to corners, angles, etc.
- High elasticity ensures only a very small loss in mechanical properties of the membrane.
- Available in 2 versions: as reinforcement (GEOMAX) or as superior / inferior protection of membranes, and drainage (GEOMAX PROTEC).
- GEOMAX is available in small widths (30 cm), ideal for wall and floor areas, and when preparing areas before waterproofing.

#### **3.8.2 MAIN APPLICATIONS:**

- Internal layer to reinforce IMPERMAX against puncture caused by angles, sharp elements, edges, etc.
- To avoid the self levelling effect of PU Resins when applying on vertical / steep surfaces.
- GEOMAX PROTEC is laid onto the surface of IMPERMAX before covering IMPERMAX with mortar and tiles ( ), minimising friction on the membrane, and increasing resistance against puncture, also assisting water evacuation through capillarity drainage, both above and below.
- Protecting IMPERMAX on un-even surfaces.
- Better homogeneity of the product (more even thickness) especially in the case of spray application of IMPERMAX membrane, or when waterproofing wall / floor areas and other vertical spots.

- Creating a limit when filling expansion joints to avoid applying too much product in the joint.



### 3.8.3 APPLICATION

- Unroll the product on the surface to treat.
- Cut using the appropriate tools.
- As a reinforcement and to slow down resin levelling in steep areas, apply directly onto the first coat while it is fresh. This ensures Geomax stays attached to the membrane and avoids defects and wrinkles.
- As a final protection before covering IMPERMAX with tiles and mortar, apply the product while IMPERMAX is still sticky to avoid GEOMAX being lifted by the wind.

### 3.8.4 AVAILABLE SIZES

Rolls 0.3 m Wide \* 100 m long (30 m<sup>2</sup>).  
Rolls 1.5 m wide \* 100 m long (150 m<sup>2</sup>).

### 3.8.5 TECHNICAL PROPERTIES.

NORM	PROPERTIES	UNIT	GEOMAX	GEOMAX PROTEC
UNE EN 29073-1	Weight	Gr / m <sup>2</sup>	83,7	200
UNE EN 29073-2	Thickness	Mm	0,65	1,2
UNE EN ISO 10319	Tensile strength MD	kN	1,85	1,8
UNE EN ISO 10319	Tensile Strength CD	kN	4,21	1,8
UNE EN ISO 10320	Elongation MD	%	93,26	32
UNE EN ISO 10321	Elongation CD	%	94,34	60
UNE EN ISO 12236	Puncture resistance	kN	0,50	0,4
UNE EN ISO 11058	Water permeability	m/s		4,4*10 <sup>-2</sup>
UNE EN ISO 12958	Water flow in plane	M <sup>2</sup> /s		3,2*10 <sup>-6</sup>

### 3.8.6 SYNERGY IMPERMAX – GEOMAX.

NORM	Description	Unit	GEOMAX	GEOMAX+IMPERMAX
UNE-EN965	Weight	gr/m <sup>2</sup>	83,7	1.377
Internal test K.C.	Thickness	Mm	0,67	1,64
UNE EN ISO 10319	Tensile Strength MD	kN	1,85	<b>9,67</b>
UNE EN ISO 10319	Tensile Strength CD	kN	4,21	<b>9,84</b>
UNE EN ISO 10319	Elongation MD	%	93,26	33,79
UNE EN ISO 10319	Elongation CD	%	94,34	45,22

### 3.9 Minimum membrane thickness of each layer in the system

The minimum thickness of the FINAL membrane shall be 1.6 mm (according to the European Technical Approval). To obtain this, there must be a minimum quantity of resin of 1.9 Kg/ m<sup>2</sup>, ideally applied in 2 to 3 coats. Thicker layers are not a problem, provided they are applied in several coats.

It is not advisable to apply more than 2 Kg/m<sup>2</sup> in one layer, as it becomes very difficult for the product to evacuate gases properly and to obtain a film free from bubbles. If applying more than 1 Kg / m<sup>2</sup> / coat, a spiked roller while product is still liquid, to release bubbles coming from the blending of the product or which emanate from porous substrates.

### 3.10 Time between coats, depending on atmospheric conditions

IMPERMAX curing time and waiting time between coats depends on atmospheric conditions (temperature and relative humidity in the air). As a general guide, one can observe the following rules:

ATMOSPHERIC CONDITIONS	Curing of IMPERMAX without S. Accelerant	Curing of IMPERMAX with S. Accelerant
<b>HIGH TEMPERATURE (&gt; 30°C) AND HUMIDITY IN THE AIR (&gt; 70%)</b>	6 to 8 hours	2 to 4 hours
<b>HIGH TEMPERATURE (&gt; 30°C) / LOW HUMIDITY IN THE AIR (&lt; 50%)</b>	6 to 8 hours	2 to 4 hours.
<b>LOW TEMPERATURE (&lt;10°C) AND HIGH HUMIDITY (&gt;60%)</b>	:8 to 10 hours	6 to 8 hours.
<b>LOW TEMPERATURE (&lt;10°C) AND LOW HUMIDITY (&lt;50%)</b>	12 to 24 hours.	8 to 10 hours.

NOTE: In the summer and winter months application must be avoided in times of extreme temperatures (hot or cold). For this reason, it is recommended in winter months to apply product during mid day hours (so substrate is as dry as possible), and in summer months apply product early in the morning or late in the evening.



## **Total cure time for the final surface**

Even though, in most cases, product is dry after 24 hours, it is recommended to wait at least 7 days after application before covering with tiles or submitting the surface to intense traffic.

## **4 CRITICAL POINTS**

(See also Support preparation, and drawings in Section 10).

### **4.1 Edges**

Sharp and rouge edges should be removed or treated with Geomax between coats of IMPERMAX, in order to avoid the membrane being punctured by these sharp edges.

### **4.2 Surface joints**

At the joining areas between vertical and horizontal surfaces, and in general before proceeding to application of IMPERMAX, it is recommended to apply a first coating of IMPERMAX on the wall (up to 20 cm) and on the floor (10 cm). Following this GEOMAX 30 cm should be laid while the product is liquid. This will result in a seamless and continuous covering of this critical point. Subsequent layers of IMPERMAX will then be applied.

### **4.3 Expansion joints**

Expansion joints should be filled with an appropriate PU Sealant (NEVER SILICONES), or with IMPERMAX + mineral fillers (Calcium Carbonate or equivalent), to make the product thicker. In all cases, apply a coating of IMPERMAX followed by a strip of GEOMAX 30 cm wide on the surface, and in the direction of the expansion joint, so it acts as a bridge over the expansion joint.

### **4.4 Drains**

For drains, it is important to apply a first coating of IMPERMAX before installing them, so that the membrane can act as an adhesive while ensuring total continuity in the waterproofing.



This will be followed by the main coatings of membrane which will go all the way to the edge of the drain.

#### **4.5 Treatment of existing fixtures**

In case of treatment or repair of existing fissures, it is recommended to use GEOMAX attached on a first coating of IMPERMAX. This is also recommended in areas where there are significant differences in height (more than 3 mm) and rough / sharp angles (i.e. deteriorated tile roofs).

### **5 TOOLING AND ANCILLARIES**

Recommended tools for the best application of product are:

- Short fibre rollers, compatible with solvents.
- Airing spiked roller.
- Spike shoes (so as to be able to walk on the product right after application).
- Electric mixer / blender (like mortar / cement mixing machines). Toothed blade (up to 28 cm in height).

### **6 RESIDUES**

Empty product containers shall be treated as metal disposal. It is important to remove as much of the plastic residue as possible, which can be disposed of as Polyurethane plastic.

Metal tools should be washed immediately after application with polyurethane solvents (such as Rayston PU Solvent).

### **7 SPECIAL MEASURES**

It is important to prevent damage to the membrane from moving vehicles or heavy machinery during works. Protection of the membrane with a geotextile of minimum 150 g/m<sup>2</sup> is recommended.

### **8 SAFETY MEASURES**

#### **8.1 Product risk phrases:**

F- FLAMMABLE

Xn- HARMFUL

R Phrases

R10

Flammable

R20/21

Harmful by inhalation and by skin contact

R42

Possibility of sensitization by inhalation and by contact with skin

R36/37/38

Irritating to eyes, skin and respiratory traces

S Phrases

S25

Avoid contact with eyes

S26

In case of contact with eyes, rinse immediately and thoroughly with water. Ask for medical assistance

S28

In case of contact with skin, rinse immediately and thoroughly with water and soap

## **9 MAINTENANCE AND REPAIR**

**9.1 Instructions for maintenance and repair, including inspection frequency, and specific measures related with any final protection coatings.**

### **9.1.1 DEGRADATION AND BLISTERING**

In case of degradation or blister formation in any specific area, it is recommended to clean and remove product. In case of blistering it is important to leave the surface to dry for at least 2 weeks or use Humidity Primer. Repair coatings shall be applied afterwards (and after checking the precise reason for degradation or blistering), making sure that there is a minimum overlap of 3 cm on surrounding membrane.

### **9.1.2 MEMBRANE EXPOSURE**

If IMPERMAX membrane is to be left exposed, it is recommended to apply a top coating of Impertrans (moderate traffic) or Colodur (Heavy traffic), either pigmented or transparent to greatly improve the longevity of the surface.

### **9.1.3 INSPECTIONS**

For safety reasons, it is recommended to periodically inspect flat roofs, especially in areas with high rainfall and heavy thunderstorms, making sure that dirt, leaves, etc do not block drains, causing accidents.

### **9.1.4 HEAVY TRAFFIC**

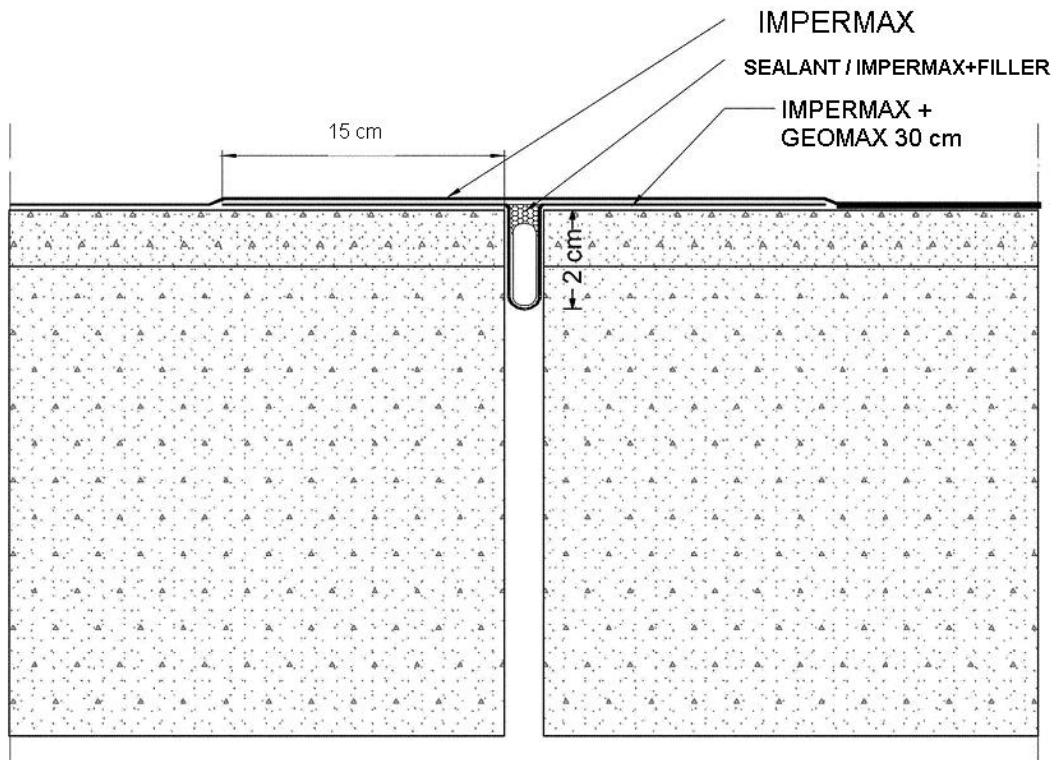
In case of heavy traffic on the surface (i.e. vehicle traffic), the membrane must be protected by a top coat of COLODUR and mineral granules (quartz, silica, etc) are recommended to be applied on the first layer of COLODUR 60%.

### **9.1.5 CONTRASTING COLODUR COAT**

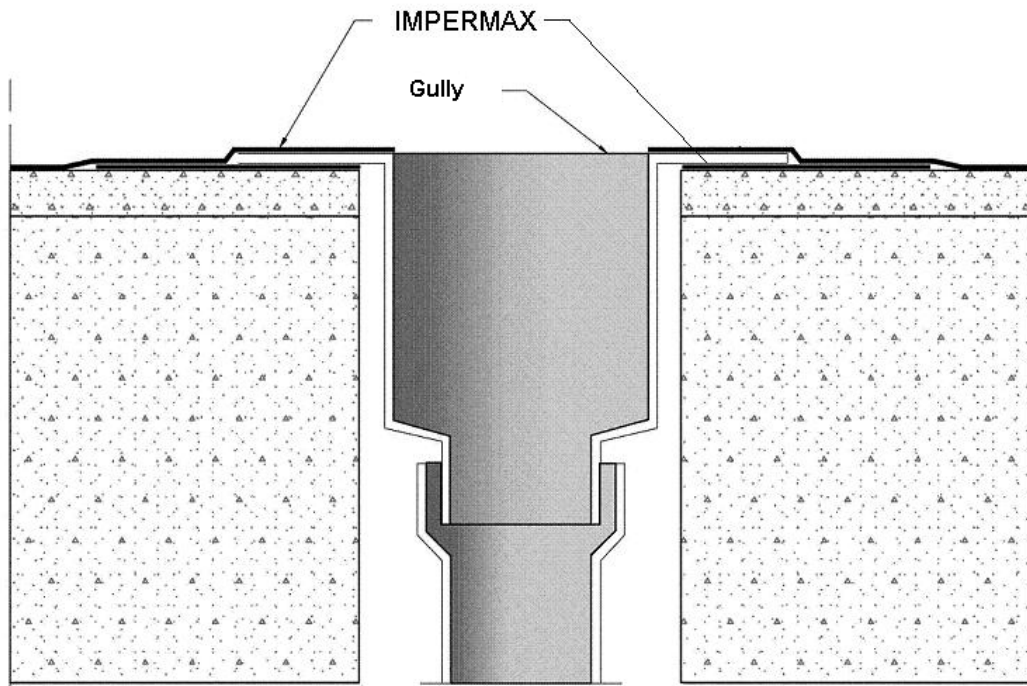
If a final contrasting coat of COLODUR 60% is applied, over time this will also act as a good indicator of wear. If the contrasting colour below the top coat becomes visible this will signify that it is time to apply a new COLODUR top coating layer. If this is not done then lower layers will suffer degradation.

## 10 SKETCH DETAILS

### 10.1 Treatment of expansion joints

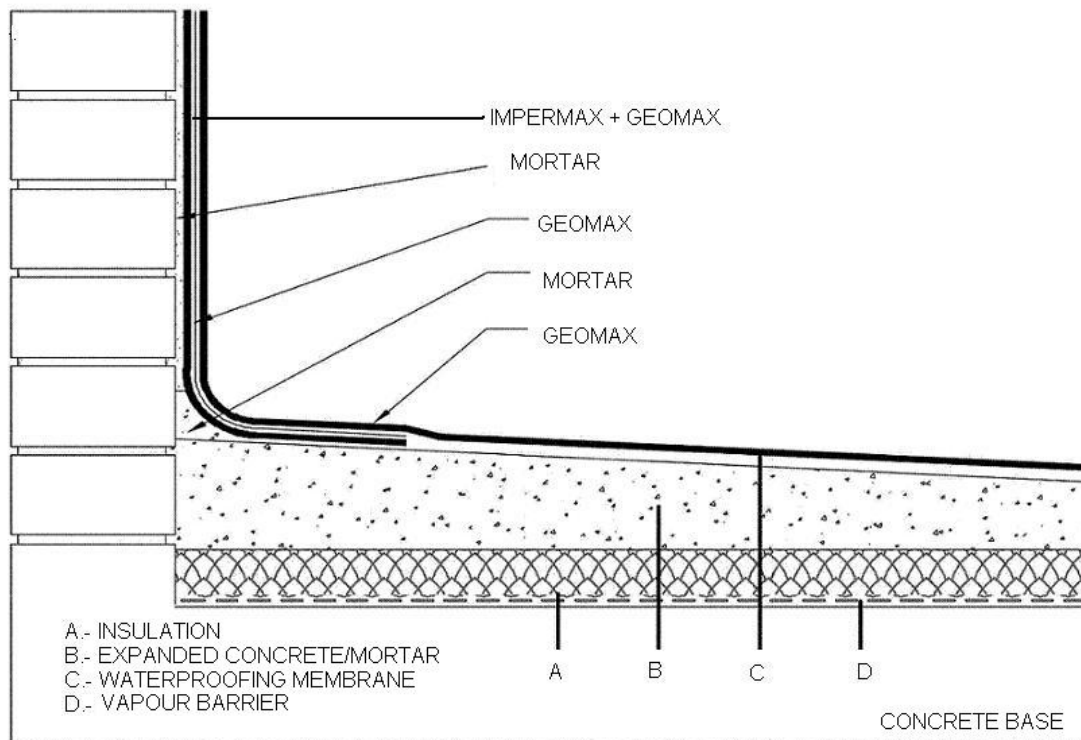


### 10.2 Roof gully

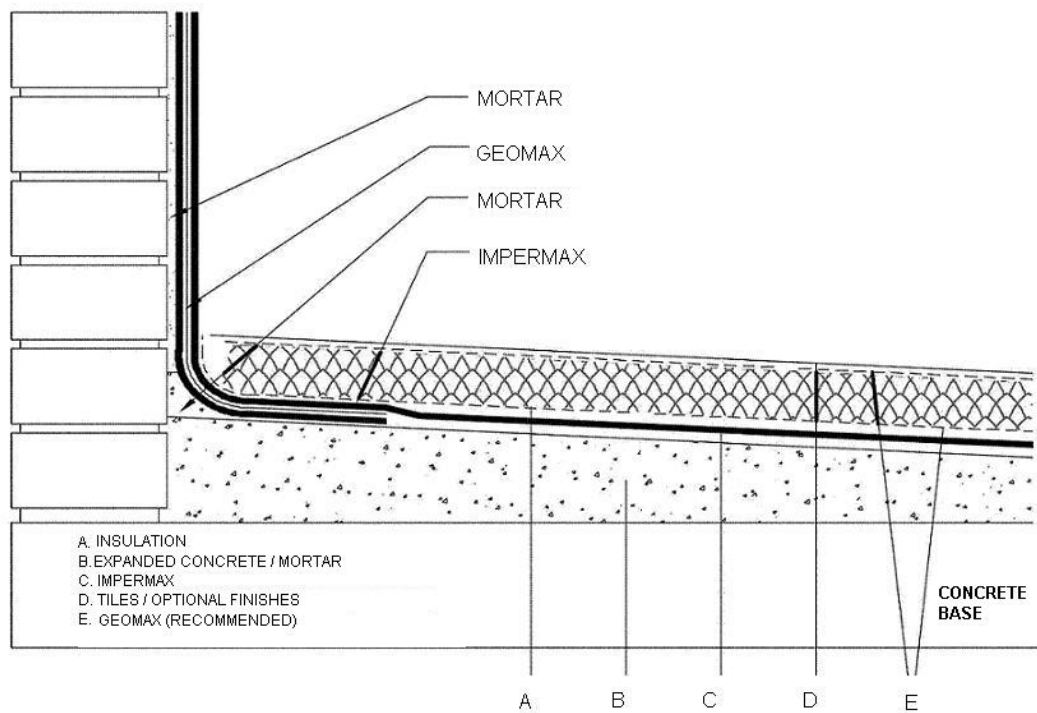


### 10.3 Treatment of unions between vertical / horizontal supports

#### 10.3.1 CASE A. WATERPROOFING MEMBRANE ON INSULATION



#### 10.3.2 CASE B. INSULATION ON WATERPROOFING MEMBRANE



Note: The information contained in this manual, as well as advice provided in written or verbal form or by means of trials/tests are given in good faith and based on our experience, and according to Impermax System /ETA O6/ 0263. This manual does not constitute a warrantee.

The recommendations in the manual do not take account of the circumstances of each specific application and installers/users must conduct specific site tests to determine the suitability of the systems.