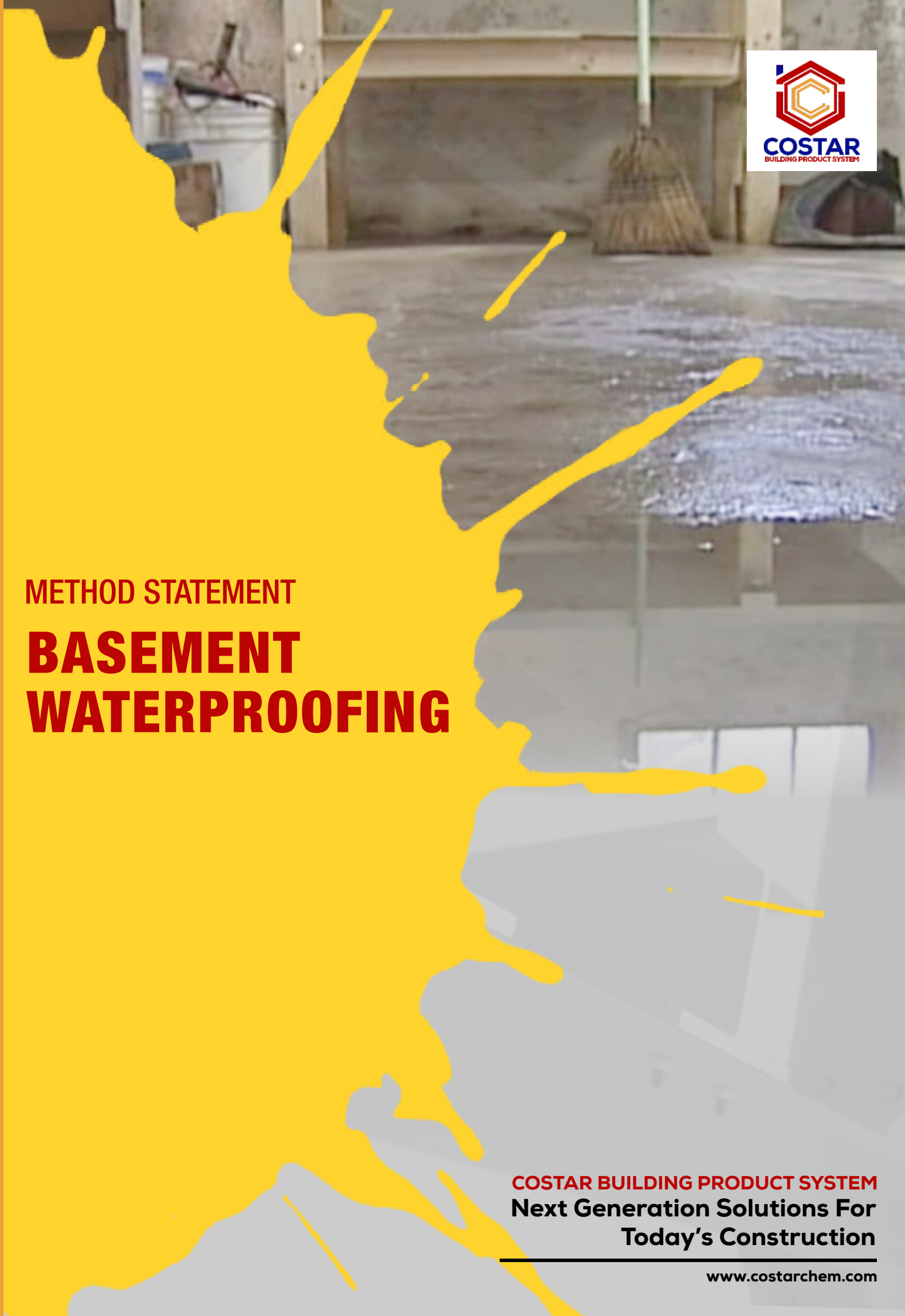

COSTAR
BUILDING PRODUCT SYSTEM

METHOD STATEMENT

BASEMENT WATERPROOFING

COSTAR BUILDING PRODUCT SYSTEM

Next Generation Solutions For Today's Construction

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1. SCOPE

This method statement describes the step by step procedure for waterproofing a basement

2. DESCRIPTION

This method statement describes the repair and waterproofing of basements and retaining walls to best practice.

2.1 LIMITATIONS

- Products shall only be applied in accordance with their intended use.
- The most recent and relevant Product Data Sheets (PDS) and Safety Data Sheets (SDS) shall apply.
- This method statement is only a guide and shall be adapted to suit local products, standards, legislation or other local requirements.

3. REFERENCES

To ensure correct application of all components of Costar products, please refer to the following documents of each product component:

- PDS (Product Data Sheet)
- SDS (Safety Data Sheet)

4. PRODUCTS

Best Practice states that a waterproofing membrane should be used alongside a waterproofing admixture:

For areas with high water table:

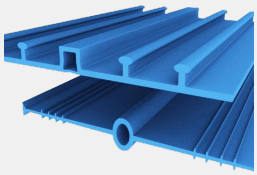
	Krystal 2000/Krystal 2600	Product Description
Waterproofing Products	**Krystal 2000**  **OR** **Krystal 2600**  	Krystal Plug is 1-component, cementitious non-shrink, hydraulic cement-based on crystalline waterproofing technology. It withstands strong hydrostatic pressure, is breathable, has no odour, no fume & is nonflammable. Krystal Plug ensures permanent impermeability of concrete. Krystal Coat is one-component crystalline waterproofing slurry that is specially designed to permanently waterproof both old and new concrete. It lowers the permeability of concrete.

Waterproofing Products	Conseal 300/Costar 1k	Product Description
	Conseal 300 	CONSEAL 300 is a pure bitumen emulsion, with excellent elastic property used for long-lasting waterproofing. It is a single component liquid which dries to form a black flexible coating.
	OR	
	Costar 1k 	Costar 1K is a blend of Portland cement, well graded quartz sand and polymer enhanced chemical ingredients which when mixed with water, forms a waterproof coating for concrete surfaces. It can be used above or below the grade.

For areas with low water table:

Waterproofing Products	Hydropruf WP 300/ Krystal coat	Product Description
	Hydropruf WP 300 	Hydropruf WP 300 is an integral waterproofing admixture specially designed to improve the quality of concrete and mortar by waterproofing and reducing the water demand for required workability and minimizes segregation and bleeding.
	OR	
	Krystal Coat 	Krystal Coat is one-component crystalline waterproofing slurry that is specially designed to permanently waterproof both old and new concrete. It lowers the permeability of concrete.

For sealing joints:

Water Stop	PVC Water stop/ Swellable Water Stop	Product Description
	PVC Water stop 	COSTAR PVC Waterstop is extruded from a high grade PVC compound which has been formulated to give excellent flexibility and longevity characteristics.
	OR	
	Swellable Water Stop 	Costar Swellable Waterstop is hydrophilic swelling waterstop which exhibits excellent durability and water sealing capacity. It expands as it absorbs water and fills concrete joint gaps conforming to the gap variation, ensuring excellent sealing.

5. INVESTIGATION

Remove tiles or any other floor covering in order to find out the location and cause of the leakage.

6. APPLICATION METHOD/TOOLS

6.1 Fit the water stop (Costar PVC Water stop/ Costar Swellable Water Stop) appropriately. (check technical data sheet for detailed application procedure.

For areas with high water table:

6.2 Cast Concrete with Krystal 2000/Krystal 2600

Mix Krystal 2000/krystal 2600 with concrete mix based on water to cement ratio in mix. (See method statement for detailed application procedure)

W/C Ratio	Dosage based on weight of cement
<0.4	0.75%
>0.4-0.5	0.80%
>0.5-0.55	0.90%

6.3 Application of Krystal Coat

Adequate surface preparation is required before the application of the treatment. The surface must be clean, free from dirt or grease and loose particles. The surface should be surface saturated with water.

6.4 Application of Costar 1k (Polymer Modified Coating)

- Add 5 parts of Costar 1K powder to 2 parts of water and mix for at least 3 minutes with a mechanical mixer to a creamy slurry consistency for brush or broom and to a pump-able consistency for spray applications.
- Apply Costar 1k with a brush or broom, or spray apply on the concrete surface.
- Leave as a brushed finish or trowel up by a skilled plasterer to a relatively smooth cementitious finish.
- Apply the second coat as soon as the first coat has set, but still “green”.

6.5 Or Application of Conseal 300 (bituminous waterproofing membrane)

- Stir well before using for at least 2-3 min.
- Apply the CONSEAL 300 onto the surface by roller or brush, until all surfaces is covered. Reinforce always with the CONSEAL Fabric at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet CONSEAL 300 a correct cut piece of CONSEAL Fabric, press it to soak, and saturate again with enough CONSEAL 300.
- We recommend reinforcement of the entire surface, with the CONSEAL Fabric. Use 5-10cm stripe overlapping. After 8-24 hours, apply another layer of the CONSEAL 300.
- For demanding applications, apply a third layer of the CONSEAL 300.
- If CONSEAL 300 is to be covered with ceramic tiles, fully saturate with ovendry silica sand (corn-size 0.4-0.8mm) the last layer while still wet. This saturation will create an adhesion bridge to the tile adhesive that will follow.

For areas with low water table:

6.6 Cast concrete with Hydropruf 300

- Mix Hydropruf 300with concrete mix at 250ml to 500 ml per 50kg bag of cement. (See method statement for detailed application procedure)

6.7 Substrate Preparation

Adequate surface preparation is required before the application of the treatment. The surface must be clean, free from dirt or grease and loose particles. The surface should be surface saturated with water.

6.8 Application of Krystal Coat

- Mix 3 parts of Krystal Coat powder with 1 part of clean water and mix for at least 3 minutes with a mechanical mixer to a creamy slurry consistency.
- Apply Krystal Coat either by spray application, brush application or dry-sprinkle and power-trowel or wooden float application. (See method statement for detailed application procedure).
- Apply in 2 coatings (vertically and horizontally).

7. INSPECTION, QUALITY CONTROL

As part of "Good Practice" the contractor shall apply an inspection procedure to check the quality of the applied protection system.

8. DISCLAIMER AND COSTAR COMPANY ADDRESS

All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty either expressed or implied. User shall rely on his or her own information and tests to determine suitability of the product for the intended use and user assumes all risk and liability resulting from his or her use of the product. Nothing contained in any supplied materials relieves the user of the obligation to read and follow the warnings and instruction for each product as set forth in the current Technical Data Sheet, product label and Safety Data Sheet prior to product use away.