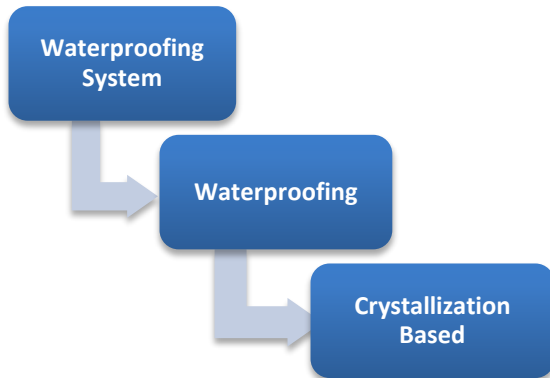


## FAMILY TREE



## PRODUCT DESCRIPTION

Nasa Proof CWL is a single component liquid waterproofing system by crystallization method. It penetrates into the micropores and fine capillaries inside the concrete. It reacts with the cement matrix to form insoluble inorganic complex ion crystals. As long as moisture is present, Nasa Proof CWL remains active and will seal hairline cracks both present and future.

## FIELD OF APPLICATION

<b>Area Type</b>	: <input checked="" type="checkbox"/> Dry	<input checked="" type="checkbox"/> Semi-wet	<input checked="" type="checkbox"/> Submerged
<b>Type of Application</b>	: <input checked="" type="checkbox"/> Horizontal	<input checked="" type="checkbox"/> Vertical	
<b>Substrates</b>	: <input checked="" type="checkbox"/> Concrete	<input checked="" type="checkbox"/> Porous Tiles	<input checked="" type="checkbox"/> Screed
	<input checked="" type="checkbox"/> Plaster	<input checked="" type="checkbox"/> Natural Stone	<input checked="" type="checkbox"/> Marble

## Area OF APPLICATION

Nasa Proof CWL is a new generation waterproofing system specially for aggressive environment for below and above grade applications. It can be used for various applications in concrete structures including marine and coastal structures, rafts, precast panels, water storage tanks, highways, runways, roofs, decks, bridges, cut and cover tunnels, silos, car parks, swimming pools, pipes, lift pits, etc. It is an ideal replacement for the old tedious and hazardous method of preformed SBS waterproofing membrane systems for basements.

## PROPERTIES

<ul style="list-style-type: none"> <li>• Penetrates deep into the concrete.</li> <li>• Very good impermeability.</li> </ul>	<ul style="list-style-type: none"> <li>• Non-toxic and eco-friendly.</li> <li>• UV resistant, no topping or protection required, can be overcoated.</li> </ul>
<ul style="list-style-type: none"> <li>• Produces dense and durable concrete.</li> <li>• Reduces chloride and sulphate penetration.</li> <li>• Prevents corrosion in structures.</li> <li>• No protection boards required when backfilling.</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot be damaged, no debond as it is a subsurface membrane.</li> <li>• Suitable for use in contact with potable water.</li> <li>• Remains active for life of concrete.</li> <li>• Reseals hairline cracks (self-healing) on contact with moisture.</li> </ul>
<ul style="list-style-type: none"> <li>• Can be used with concrete containing PFA, GBFS, or Silica fume.</li> <li>• Increases useful life of structure.</li> <li>• Increases concrete's hardness.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides additional resistance to mild acids and alkali attack.</li> <li>• Withstands thermal stress.</li> </ul>

## PREPARATION

<b>Working Conditions</b>	: 5° to 45°C.
<b>Tools / Equipment</b>	: Brush or Roller or Spray machine.
<b>Substrate</b>	: Concrete surfaces to be treated must be clean and free of laitance, dirt, films, paint, coatings or other foreign matter. The surfaces must also have an open capillary system

This Technical Data Sheet is prepared based on extensive research and practical experience. With the varieties of the materials and conditions of application is out of our control, Apollo assumes no responsibility for the obtained results and / or damages caused by the usage of this product. Apollo Technical Service family is always available at your disposal for any advice and directions that might be required.

for the Nasa Proof CWL treatment. If surfaces are too smooth the concrete should be acid etched, lightly sandblasted or water blasted. Structural defects such as cracks, faulty construction joints and honeycombs should be routed out to sound concrete and repaired. Nasa Proof CWL is not designed for use in expansion joints or “moving” Cracks. Horizontal surfaces should preferably have a rough wood float or broom finish. Special considerations to all newly poured cement based substrates. Ensure that substrates are sufficiently cured (Moisture content not more than 5%), dimensionally stable, shrinkage and structural strain movements free and stable. Concrete substrate maybe prepared by acid etching followed by cleaning with water to remove all traces of the acid. Cracks in concrete, pinholes, potholes and other surface irregularities should be repaired using suitable repair materials.

<b>Joints</b>	: In general, the product shall not be placed above expansion or construction joints. NASA Flexseal shall be used to manipulate the joints.
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## MIXING

<b>Ratio</b>	: No materials / liquids shall be added of any type. The product is pre-mixed and ready for usage. Only stir prior to use.
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## APPLICATION

<b>Application Method</b>	: By roller or brush or Spray Machine.
<b>Coating Thickness</b>	: 1 mm / coat .
<b>Coverage</b>	: 5 m <sup>2</sup> /ltr/coat Actual coverage depends on porosity and texture of the substrate.
<b>Position</b>	: The described process is suitable for vertical and horizontal applications.
<b>Process</b>	: Nasa Proof CWL should be applied after two to four weeks of pouring the concrete or any time later. It is effective especially on old concrete. Nasa Proof CWL may be applied to concrete immediately after forms are stripped acting as a curing compound and sealing material. Nasa Proof CWL can be applied by spray, brush or roller. For optimum results on horizontal concrete surfaces, it is recommended that Nasa Proof CWL be flooded over the concrete. For vertical surfaces, spray application is recommended. Apply with low pressure spray and allow to dry for 5-6 hours before applying the second coat. Concrete surface must be dry, 24 hrs before application of Nasa Proof CWL. Sealing of joints etc., should be carried out before application. In below ground level concrete surface applications, ensure concrete surfaces are dry before application.
<b>Curing</b>	: Water is necessary for curing which facilitates reaction of Nasa Proof CWL. Curing should be done by placing wet hessian over the applied area for a minimum period of 14 days. Mist spray curing with water can also be carried out.
<b>Cleaning</b>	: All tools / equipment shall be cleaned immediately after use with NASA Cleaner. Hardened materials should be cleaned mechanically with Solveteck.

## PACKING

<b>Standard Package</b>	: Nasa Proof CWL is available in 20 ltr and 200 ltr.
<b>Custom Package</b>	: Special packages can be arranged for large requirements.
<b>How to Order</b>	: Specify the Product Name followed with a hyphen and package size.

## STORAGE CONDITION

<b>Shelf Life</b>	: 12 months from the date of manufacturing.
<b>Temperature</b>	: 2°C and 50°C.
<b>Points of Attention</b>	: Store in shaded area and properly sealed in its original packing.

## TECHNICAL PROPERTIES

PROPERTY	STANDARD	VALUE
<b>Standard</b>	ASTM	
<b>Testing Conditions</b>	Tests were carried out in Apollo R&D laboratory @ 25°C	
<b>Component</b>		Single component
<b>Form</b>		Liquid
<b>Colour</b>		Clear
<b>Specific Gravity</b>	ASTM D1475	1.10 ± 0.05
<b>Toxicity</b>	BS 6920-1	Non-Toxic
<b>pH</b>	BS 1377-3	11 - 12
<b>Drying Time</b>	ASTM D2939	Min 2 hr
<b>Recoat Time</b>		5 – 6 hr
<b>Impact test</b>	ASTM C805	15-20% increase over untreated surface
<b>Water Permeability</b>	BS EN 12390-8	> 90% improvement over control

## ATTENTION

<b>PPE</b>	: It is recommended to use full PPE while working with the product to avoid any possibility of irritation to skin or eyes. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary
<b>Hazardous Classification</b>	: Hazardous transportation
<b>Fire</b>	: Non-flammable

## APOLLO AT THE GLANCE

Apollo is confident with the technical solutions and high quality end products served to the customers.

Apollo invites you to explore other services and products:

- |  |                                      |                                      |
|--|--------------------------------------|--------------------------------------|
| • R&D and manufacturing custom solutions | • Adhesives                          | • Bonding Agents Systems             |
| • Building Finishing Systems             | • Concrete Admixture                 | • Concrete Repair Systems            |
| • Flooring Systems                       | • Grouts & Anchoring Systems         | • Painting & Putty Systems           |
| • Protective Coatings                    | • Sealant & Jointing Solutions       | • Structural Strengthening Solutions |
| • Surface Treatment Solutions            | • Tile Adhesive & Grouting Solutions | • Waterproofing Systems              |