

0325P AQURON 7000 HYDROGEL CONCRETE PROTECTION

Branded worksection

This branded worksection *Template* has been developed by NATSPEC in conjunction with **MARKHAM GLOBAL** and may be used whilst the Product Partner is licensed to distribute it. The copyright remains with NATSPEC. As with all NATSPEC worksections, it is the responsibility of the user to make sure it is completed appropriately for the project. The user should also review its applicability for local conditions and regulations. Check www.natspec.com.au for the latest updated version.

Worksection abstract

This branded worksection *Template* is applicable to the use of AQURON 7000 HYDROGEL which is a concrete soluble chloride reducer for concrete protection and waterproofing. It does not cover the physical protection of concrete by means of barriers, guards, corner protection, plates, etc.

Background

If AQURON 7000 HYDROGEL is being used on new or fresh concrete, use this branded worksection *Template* in conjunction with *0310 Concrete – combined*, *0314 Concrete in situ*, *0321 Precast concrete* or *0322 Tilt-up concrete*, as required.

Guidance text

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the NATSPEC Toolbar or the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

Optional style text

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- *0310p AQURON 1000 HYDROGEL in concrete - combined.*
- *0310p CONQOR B52 HYBRID-HYDROGEL in concrete – combined.*
- *0314 Concrete in situ.*
- *0315 Concrete finishes.*
- *0411 Waterproofing – external and tanking.*
- *0621 Waterproofing – wet areas.*
- *0651p AQURON CONCRETE SUBSTRATE TREATMENT in resilient finishes.*

Documenting this and related work

You may document this and related work as follows:

- Show on drawings areas that require treatment using *0325p AQURON 7000 HYDROGEL concrete protection*.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Specifying ESD

The following may be specified by retaining default text:

- Zero VOC concrete protection products.
- Zero VOS concrete protection products.
- Increased durability of concrete elements.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

MARKHAM GLOBAL – adding life to concrete.

Markham is not just another product supplier. We offer solutions for asset owners, architects, civil engineers, construction professionals and concrete placement. We specialise in PENETRATING HYDROGEL treatments for new and existing concrete.

Markham's team is continually researching and developing products and systems that are more environmentally friendly, cost-effective, innovative, and of course easier to use.

1.1 RESPONSIBILITIES

General

Requirement: Provide 0325p AQURON 7000 HYDROGEL concrete protection, as documented.

Documented is defined in 0171 General requirements as meaning contained in the contract documents.

1.2 COMPANY CONTACTS

MARKHAM GLOBAL technical contacts

Website: www.markhamglobal.com.au/contact-markham.

1.3 CROSS REFERENCES

General

Requirement: Conform to the following:

- 0171 General requirements.

0171 General requirements contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. 0171 General requirements references the 018 Common requirements subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.4 MANUFACTURER'S DOCUMENTS

Technical manuals

Website: Visit www.markhamglobal.com.au/markham-products/remediation-of-existing-concrete/aquron-7000-concrete-repair for product information and to request technical data and safety data sheets.

1.5 INTERPRETATION

Abbreviations

General: For the purposes of this worksection the following abbreviations apply:

- SDS: Safety Data Sheet.
- TDS: Technical Data Sheet.

*Edit the **Abbreviations** subclause to suit the project or delete, if not required. List alphabetically.*

1.6 SUBMISSIONS

Subcontractors

Applicator: Submit evidence from MARKHAM GLOBAL that the applicator is approved to apply AQURON 7000 HYDROGEL.

Application shall only be completed by persons who have current approval as applicators from MARKHAM GLOBAL.

Substrate acceptance: Submit evidence of applicators' acceptance of the concrete surface before starting application.

Delete, if not required. The applicator should notify the contractor of any surface defects that require correction before starting application.

Warranties

Performance: Submit details of 15 year warranty covering both the product and the application.

Discuss with MARKHAM GLOBAL. Edit, as required.

15 year warranty available on MARKHAM GLOBAL performance supervised supply and apply contracts.

1.7 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Prepared concrete surface before application of AQURON 7000 HYDROGEL.

*Amend to suit the project adding critical stage inspections required. See **SUBMISSIONS** for requirement for applicator to accept substrate before application.*

Hold points, if required, should be inserted here.

2 PRODUCTS

2.1 GENERAL

Product substitution

Other products: Conform to PRODUCTS, **GENERAL, Substitutions** in *0171 General requirements*.

The *0171 General requirements* clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling

Requirement: To the AQURON 7000 HYDROGEL TDS and SDS.

Product identification

General: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

2.2 AQURON 7000 HYDROGEL

General

Description: A non-toxic, non-petroleum, waterborne solution that is environmentally safe, user friendly and an economical treatment for protecting reinforced concrete against corrosion and deterioration.

Key Benefits:

- Arrests steel corrosion, carbonation, alkali reactivity (AAR-ASR) and Delayed Ettringite.
- Formation (DEF).
- Penetrates into both new and aged existing concrete to depths up to 200 mm.
- Immobilises or purges existing chlorides within concrete and prevents chloride ingress.
- Eliminates moisture migration and increases resistivity of concrete.
- Increases steel surface passivation.
- Extends durability and service life of concrete structures.
- Enhances both compressive and flexural strength.
- Compatible with jointing/crack remediation treatments.

Application method: Sprayed.

Shelf life: Indefinite, refer to product TDS for storage requirements.

Performance

Requirement:

- Provide long-term hydrogel waterproofing (moisture and vapour) from within the concrete matrix.
- Penetrate concrete to a depth of 100 mm to 200 mm, creating a penetration zone from the concrete surface.
- Eliminate the ingress of surface chlorides into the penetration zone and provide a corrosion inhibitor to embedded reinforcement.

Product properties

Physical state: Liquid.

Colour: Clear/green.

Odour: Slight.

VOC/VOS content: None.

Flash point: None.

Flammability: None.

pH: 12.

Toxicity: None.

Boiling Point: 110°C.

Freeze temperature: 0°C.

Warranties

Period: 15 Years.

Discuss with MARKHAM GLOBAL. Edit, as required.

15 year warranty available on MARKHAM GLOBAL performance supervised supply and apply contracts.

3 EXECUTION

3.1 PREPARATION

Substrate

Cleaning: Before applying AQURON 7000 HYDROGEL, prepare the concrete surface by suitable methods to provide a clean surface, free from dirt, salts, oils, standing water, or any residues of sodium silicates or acrylic curing compounds.

Abrasive preparation: Where abrasive preparation, such as grinding, shot-blasting or sanding, is required to remove contaminants, clean the concrete surface upon completion and before application of AQURON 7000 HYDROGEL.

Protection

Adjacent surfaces: Protect adjacent surfaces, such as glass or aluminium, from overspray or splashing during application.

Contact with adjacent glass or aluminium may cause adjacent surface to etch, dull, distort or discolour.

3.2 APPLICATION

General

Requirement: Conform to requirements of the AQURON 7000 HYDROGEL TDS.

Applicator: To carry applicator's approval to apply AQURON 7000 HYDROGEL.

AQURON 7000 HYDROGEL must only be applied by applicators with current approval. Contact MARKHAM GLOBAL for details of currently approved applicators.

Temperature

Freezing: Do not apply to frozen substrate, or if freeze may occur during the 12 hours following application. Applicator to assess the suitability of weather conditions.

Equipment

Sprayer: Airless paint sprayer with a 3/8 inch internal diameter fluid hose, with a .017 to .019 spray tip producing 1500 to 2000 psi outbound pressure.

3.3 COMPLETION

Cleaning

Overspray: Immediately treat any oversprayed adjacent surfaces by flushing with clean water.

Equipment: Clean all tools and equipment with water and mild soap immediately after use.

Surface finishes

Coatings: Where additional finishes to the concrete surface are documented, allow a period of 12 hours following completion of application of AQURON 7000 HYDROGEL before flushing the surface thoroughly with clean water and allowing it to dry completely before preparing surface and applying documented finishes to the manufacturer's recommendations.

Warranties

Applicator: Upon completion, submit the AQURON quality assurance documentation, completed by the MARKHAM GLOBAL approved applicator.

Discuss with MARKHAM GLOBAL. Edit, as required.

15 year warranty available on MARKHAM GLOBAL performance supervised supply and apply contracts.

4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 PRODUCT

AQURON 7000 HYDROGEL concrete treatment schedule

Property	A	B	C
Product name	AQURON 7000	AQURON 7000	AQURON 7000
Treatment area (m ²)			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit these codes in the **Schedule** to match those on drawings.

Treatment area: Enter the total surface area of concrete to be treated in square meters.

REFERENCED DOCUMENTS

The following documents are mentioned only in the **Guidance text**:

NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2018	Specifying ESD