Asset Identification Solutions

Biohesive® 225

Installation Procedure

AQUASIGN

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Revision
2

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Biohesive Installation

1. Planning

Work Area

It is necessary to plan the fixing of Aquasign® subsea markers to ensure their compatibility with other stages work, e.g. painting.

Ensure access can be gained to the installation area and that the required surface preparation can be performed properly. A flat work surface is essential to the adhesive application process. A table/work station would be required at each work area

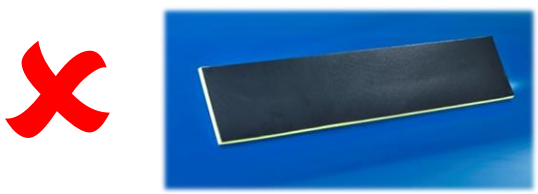
If working indoors, ensure area is well ventilated. In the event of insufficient ventilation the use of respiratory equipment is recommended.

Ensure risk of damage to Aquasign® markers from other fabrication yard activities is minimised.

Marker

ONLY NON MATERIAL BACKED AQUASIGN® MARKERS ARE COMPATIBLE WITH BIOHESIVE®

Traditional Aquasign® subsea markers are supplied with a material backing (see image below). ×
Please note that these markers are not compatible with Biohesive®. Alternative Champion Environ products should be used for their installation.



Biohesive® markers do not require this fabric backing and will be supplied with a protective backing cover which is to be removed prior to installation.

Adhesive

Always check the expiry date, on the cartridge prior to application. Biohesive® has a shelf life of 24 months. Do not use past the expiry date.

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1a. Equipment

Biohesive®, a single component silicone adhesive, is supplied in 310ml cartridges. The picture below shows the recommended equipment that should be used during installation.

Surface Preparation (refer to substrate guide section 1.c)	Abrasive Implements, e.g. wire brush, emery paper Cleaning Solvent, e.g. Acetone Primer – when recommended
Adhesive Handling	Cartridge gun Adhesive Spreader
Fixing	Hard Face Roller

1b. Personal Protection Equipment

Please consult supporting Safety Data Sheet for further details.

GOGGLES
Wear suitable approved chemical safety goggles when eye exposure is reasonably probable

GLOVES
Wear suitable protective gloves if risk of skin contact

PROTECTIVE CLOTHING
Wear suitable protective clothing as a protection against splashing or contamination

RESPIRATORY EQUIPMENT
Only applicable in cases of inadequate ventilation

Biohesive Installation

1c. Substrate Guide

Uncoated Steel

The use of a suitable primer is recommended for all bare steel applications. Please consult Aquasign for the product most suitable to your application.

Shot blast ensuring 25mm (0.98inches) overlap where Aquasign® markers are to be positioned.

Wipe with solvent impregnated cloth (such as acetone).

When possible avoid fixing Aquasign® markers over large welded areas.

Coated & Painted Steel (Epoxy, Epoxy Coal Tar, Glass Flake, PVC)

Check compatibility of Biohesive® with structure surface.

Abrade areas of structure where Aquasign® markers will be positioned with wire brush/emery paper.

Wipe with solvent impregnated cloth (such as acetone).

2. Preparation

2a. Marker

i. Remove Protective Film – Back of marker

Aquasign® markers to be affixed using Biohesive® will be supplied with a white vinyl backing cover to keep the material clean during shipment and storage. This cover must be removed prior to application.

ii. Protective Film – Front of marker

Yellow vinyl protective film will also be supplied on the front of the markers. This film remains should remain in place during the installation process to keep the surface clean.

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iii. Cleaning

Wipe the back of the marker with a solvent impregnated cloth (such as Acetone).

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2b. Surface

Prepare surface as detailed in section 1c (page 5). Mark out the area on the substrate where the marker will be fixed. Masking tape can be used to mark out area for the sealing bead ~ 5mm. This method will help keep the sealing outer bead neat.

2c. Adhesive

i. Insert cartridge into application gun provided
ii. Remove the cartridge tip
iii. Cut the dispensing nozzle to a desired bead size (11mm recommendation) and fit to cartridge

3. Installation

Biohesive is supplied in black and translucent/clear. Black has been used here for illustration purposes

3a. Adhesive Application

All markers must be placed on a flat work surface prior to adhesive application. Adhesive can be applied either to the substrate or the back of the marker panel.

Apply a 5mm bead of adhesive around the edge of the marker then loop a wave type pattern to the remaindered of the surface

3b. Spread of Adhesive

Spread the adhesive to cover the surface removing any air bubbles.

The optimum recommended film thickness is 2mm.

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3c. Marker Placement

I. Before the adhesive begins to skin over, lower the Aquasign® marker into position
II. Press down firmly
III. Roller flat to expel and air bubbles
IV. Apply a 5mm sealing bead around the parameter of marker using the manual caulking gun

Curing of Biohesive® starts as soon as the product comes into contact with atmospheric humidity. The curing rate increases with temperature.

Approximate Skin Time/Cure time @ 50%rH, 2mm thickness		
10°c	**20°c**	**30°c**
Skin: 10-12 mins Cure: 12 Hours	Skin: 6-7 mins Cure: 6-8 Hours	Skin: 2-3 mins Cure: 6 Hours

The curing rate is also affected by the local relative humidity.

Approximate Cure time @ 25°c, 2mm thickness		
25%	**50%**	**75%**
Cure: 14 Hours	Cure: 6 Hours	Cure: 4 Hours

If either temperature or humidity are higher than that listed above then the typical cure time will be reduced further.

4. Storage

Biohesive® cartridges can be re-sealed for future use. It is recommended that any part used Biohesive® cartridges are: -

- Kept in original container
- The container is kept closed and dry
- Use re-sealing cap for minimum wastage
- Stored in a cool temperature controlled location

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5. Protection

a) Aquasign® Altus™

The fluorescent pigments used in our Aquasign® Altus™ markers as susceptible to fading when exposed to direct sunlight. It is therefore essential that the protective covers supplied with the markers are installed immediately and are only removed prior to deployment.

b) Aquasign® Solis®

Aquasign-Solis® markers however contain stable signal yellow pigments that will not fade. The protective covers supplied with our Aquasign® Solis® markers are to keep the markers clean as opposed to protective from fading. These can therefore be removed at any time prior to deployment although it is recommended that these remain in place until the markers have been affixed to the substrate.

Protective cover options available:

Yellow film - protects the surface of the marker from

UV light, which causes fading. This protective cover has a slight tack and will stick to the face of the marker.

Black PVC – As well as protecting against UV light it protects against dust, grit, weld splatter and mechanical damage.

The plastic cover is to be secured in place using the duct tape provided.

6. Company & Contact Details

If you have any further questions regarding the installation of your subsea markers please contact us direct either by telephone or email: -

Email: info@aquasign.com Phone: +44 (0) 1224 897060