



Asset Identification Solutions

AQUASIGN Adhesives

Biohesive[®] 225

Aquahesive[™] 5836

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Revision
2

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Biohesive[®] 225

Biohesive[®] 225 is a high performance Silicone RTV adhesive sealant, traditionally used to install AQUASIGN's anti-fouling subsea marker systems. It is a rapid curing adhesive, skinning within a few minutes and curing overnight, depending on the ambient conditions.

One of the major advantages offered by Biohesive[®] 225 is that it can be used in geographical locations with high temperatures (>30°C / 85°F) and / or high humidity (75%+) without causing significant performance issues, although the skinning time will reduce. The adhesive becomes more viscous in cold conditions but is still useable so long as the temperature is above 2°C (36°F).

Biohesive[®] 225's pasty consistency allows it to be used in vertical and overhead applications. In its cured state it is tough yet extremely flexible, allowing its use in applications where rigid adhesives would not be considered.

As a single component adhesive, it requires no mixing or metering of curatives, instead relying on atmospheric moisture to cure. This means that the application of Biohesive[®] 225 is very straightforward, using just a basic caulking gun (also known as a mastic or skeleton gun). Biohesive[®] 225 is supplied in a 310ml cartridge to match the most common size of caulking guns.

Providing the material is stored in the correct conditions as outlined in the [datasheet](#), the shelf-life of Biohesive[®] 225 is 24 months, which is considerably longer than conventional epoxy or polyurethane adhesives. In addition, unlike two-component adhesives, cartridges of Biohesive[®] 225 can be re-used; following application, the tip of the cartridge will automatically cure and seal the remainder of the material against atmospheric moisture.

Biohesive[®] 225 has been tested against several two component polyurethane and epoxy adhesives, including Aquahesive[™] 5836, and has shown good adhesive strength to a variety of substrates. In addition, it has shown exceptional resistance to seawater in ageing

trials. Biohesive® 225 has exceptional heat resistance with an upper limit of temperature in application of 200°C (390°F) and retains its flexibility at temperatures of -65°C (-85°F).

Biohesive® 225 will not interfere with or suffer any disbondment / loss of adhesion from cathodic protection systems.

Biohesive® 225 contains no toxic components therefore does not require special labels for transport or use. It cures to a harmless solid making disposal of part-used or an empty cartridge extremely straightforward. For use, standard PPE is recommended; goggles and gloves.

The introduction of Biohesive® 225 into AQUASIGNs' portfolio offers a technically sound solution whilst strengthening our environmental credentials.



Aquahesive™ 5836

Aquahesive™ 5836 is a high-performance polyurethane adhesive for use with AQUASIGN's anti-fouling subsea marker systems. It has a pot-life of 30-45 minutes and cures overnight, depending on the ambient conditions.

Polyurethane adhesives have limitations and care must be taken to ensure that the conditions under which Aquahesive™ is mixed and applied fall within the range of a minimum temperature of 10°C and maximum humidity of no more than 65-70%.

Aquahesive™ 5836's pasty consistency makes it ideal for use in vertical and overhead applications. Once cured, it is a tough, robust material with good general physical and chemical properties.

Aquahesive™ 5836 is a two component adhesive, supplied with the curative in a ready-to-mix form in disposable containers. Once mixed, it has a long pot-life, making it ideal for bonding larger or multiple components in a short period of time. The mixed material cures to a harmless solid, making disposal straightforward. During use, personnel should wear PPE; gloves, skin protection and safety goggles.

Aquahesive™ 5836 has been tested and found to provide good adhesive strength to epoxy-coated steel, and to give excellent seawater resistance in ageing trials. Its rigid nature makes it appropriate for applications where a flexible adhesive might not be suitable. Aquahesive™ 5836 offers higher-thermal performance in service than conventional epoxy adhesives.

Aquahesive™ 5836 has a shelf-life of 12 months and should be stored in the conditions outlined in the [data sheet](#).



Correct mixing, preparation and storage of Aquahesive™ 5836 is critical in ensuring the best possible performance. The following table outlines the most common problems that may be experienced when our installation procedure or data sheets are not followed;

Observed Problem	Possible Explanation	Solution
Bubbling in Material	Humidity over 65% or mixing temperature too high	Attempt to work in conditions of reduced humidity & temperature
	Poor Mixing	Ensure two components are fully mixed before applying – see our installation video
Soft Material / Soft Patches after curing	Poor Mixing	Ensure two components are fully mixed before applying – see our installation video
	Material out of shelf-life or not stored correctly	Replace material with new adhesive
Weak or brittle material after cure	Poor Mixing	Ensure two components are fully mixed before applying – see our installation video
	Material out of shelf-life or not stored correctly	Replace material with new adhesive
Poor Bond	Poor Mixing	Ensure two components are fully mixed before applying – see our installation video
	Material out of shelf-life or not stored correctly	Replace material with new adhesive
	Contamination on Surface	Ensure all surfaces are free of dirt or grease prior to application of adhesive



Company Contact Details

If you have any further questions regarding the installation of Aquasign® subsea markers please contact us direct either by telephone or email.

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