



Product Data Sheet

Biohesive[®] 225

General Information

Biohesive[®] 225 is a single component RTV silicone adhesive traditionally used for bonding Aquasign[®] subsea markers to various substrates.

Mechanical Properties

- Adhesion over a wide temperature range (-65°C to 300°C)
- Excellent resistance to natural ageing (UV, weathering and salt mist)
- Dielectric; will not interfere with Cathodic Protection systems or suffer loss of adhesion
- 60 year guarantee which matches the lifespan of our Aquasign[®] subsea markers*

Biohesive[®] 225 is especially appropriate for sea-water resistant bonding; forming a water impermeable seal between the base of the marker and the substrate.

Biohesive[®] 225 is manufactured and supplied in accordance with ISO 9001:2000 certification.

* 60 year marker life span based on 6mm+ markers

Operational Data

Curing of Biohesive[®] 225 begins as soon as the product comes into contact with atmospheric humidity.

| Approximate Cure Time at 25°C (2mm Thickness) | | |
|---|---------|---------|
| 25% | 50% | 75% |
| 14 Hours | 6 Hours | 4 Hours |

The curing rate also increases with temperature;

| Approximate Cure/Skin Time at 50%rH, (2mm Thickness) | | |
|--|-----------------|----------------|
| 10°C | 20°C | 30°C |
| Cure: 12 Hours | Cure: 6-8 Hours | Cure: 6 Hours |
| Skin: 10-12 mins | Skin: 6-7 mins | Skin: 2-3 mins |

The minimum work temperature is 2°C and can be used in damp conditions.

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Technical Data

Before curing;

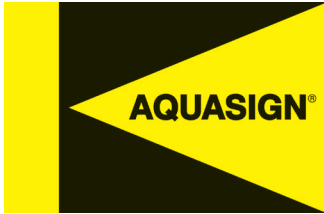
| Characteristic | Test | Value |
|-------------------------|---|-------------|
| Appearance | - | Translucent |
| Curing System | - | Acetoxy |
| Consistency | - | Thixotropic |
| Flowability (mm) | Standard BOEING S 7502, NM 459 (mm) | < 2 |
| Extrusion (g/min) | Standard NM 495 A, 3mm / 3 bars | 50 |
| Specific Gravity (25°C) | Standards ISO R 1183, DIN 53479, NM703 | 1.04 |
| Solids Content | - | 100 |
| Flaspoint | - | > 200 |
| Solvent | - | None |

After curing;

| Characteristic | Test | Value |
|--|--|---------------------|
| Shore A Hardness | Standards ISO R 868, DIN 53505, ASTM D 2240, BS 903, Par A7, NFT 46003, NM 471 | 25 |
| Tensile Strength, mPa | Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NFT 46002 (H2), NM 470 | 2.5 |
| Elongation at Break, % | Standards ISO R 37 (H2), DIN 53504, ASTM D 412 BS 903 Part A2, NFT 46002 (H2), NM 470 | 500 |
| Tear Strength, kN/m | Standards ASTM D 624 specimen A, NM 492 | 5.4 |
| Lower Temperature Limits °C | Measured using differential calorimetric analysis | -65 |
| Upper limit in use - cont. | on 2mm thick film, 1000 h | +250 |
| Upper limit in use - peak | on 2mm thick film, 72 h | +300 |
| Thermal Conductivity at 30 °C | Standard NF X 10021 | 0.20 |
| Thermal Conductivity at 150 °C | Standard NF X 10021 | 0.16 |
| Dielectric Strength, KV/mm | Standards NF C 26225, ASTM D419, IEC 243 | 19 |
| Dielectric Constant at 1 MHz | Standards NF C 26230, ASTM D150, IEC 250 | 2.8 |
| Dielectric Dissipation Factor at 1 MHz | Standards NF C 26230, ASTM D150, IEC 250 | 2x10 ⁻³ |
| Volume Resistivity Ω .cm | Standards NF C 26215, ASTM D257, IEC 93 | 1x10 ⁻¹⁴ |

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Product Application

Download our Biohesive[®] 225 Installation Procedure / Video on www.aquasign.com.

Storage

For maximum performance and ease of application AQUASIGN recommend storing the Biohesive[®] 225 cartridges within a chilled environment approx. 10°C prior to use. Whilst application temperature ranges are far higher (approx. 30°C) this will impact the cure / skinning time of the material.

- **Storage Temperature:** Minimum 2°C / Maximum 30°C
- **Shelf-Life:** Maximum 24 months - check expiry details on cartridges prior to use

Biohesive[®] cartridges can also be re-sealed for future use;

- Keep in the original container
- Ensure the container is kept closed and dry
- Use the re-sealing cap for minimum wastage

Approved Substrates

| Material | |
|----------|--|
| Plastic | Nylon [®] , Acetal [®] C, Derlin [®] , Ertacetal [®] , PVC [®] , ABS, HDPE, Polycarbonate, Acrylic, Polypropylene |
| Metal | Stainless Steel, Epoxy Coated Steel |
| Rubber | Neoprene, Silicone |

Health Information

Download our corresponding Material Safety Data Sheet (MSDS) on www.aquasign.com

Packaging

Biohesive[®] 225 is supplied in 310ml caulking cartridges which can be resealed. Manual caulking guns are also available in our accessory kits.

Availability

Biohesive[®] 225 is held as a stock item.

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