FlawGel

Technical Data Sheet

Ultrasonic Couplant

The FlawGel Ultrasonic Couplant is specially designed to work effectively on both horizontal and vertical surfaces. It showcases durability, allowing it to be used on moderately heated surfaces up to around 75°C. Additionally, FlawGel is non-corrosive, making it safe for use on various metal surfaces without causing any harm. A key benefit of the FlawGel Couplant is its quick and easy application across large areas. It is offered in two variants: FlawGel GF and FlawGel PF, both crafted to enhance the efficient transfer of sound energy between the transducer and the test piece during inspections.

Compliance:

- DIN EN ISO 25493
- ASME BPVC(T-533)
- FAA-AC#25-29(glycerin free)
- AWS
- API
- ISO 16810:2024

Features & Benefits:

- Acoustically exact on vertical, horizontal, and overhead surfaces
- Self and quick Deaeration
- Excellent coupling properties on smooth to rough surfaces
- Non-toxic & cost-effective
- Quick gel time at ambient temperatures in less than 5 mins

Physical & Chemical Properties:

	FlowGel PF	FlowGel GF
Appearance	Free Flowing Powder	Yellow Viscous Gel
Colour in visible light	White	Yellowish
Chemical Composition	Mixture of thickening agent, corrosion inhibitor, wetting agent & anti-foam emulsion	
Basis	Proprietary	
Odour	Odourless	
pH	8	
Sulphar and Halogens	No	
Propylene Glycol	No	
Glycerin	No	
Silicone	No	

Applications:

Surface Preparation:

Prior to inspection, it is essential to ensure that the surface of the part to be inspected is completely clean and free from any contaminants such as grease, water, dirt or other substances that may have been present during manufacturing or pre-treatment processes. This is necessary to prevent any interference impact on the accuracy and reliability of the test results.

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Gel Preparation:

- Mix **50gm** of FlawGel UT couplant powder in 1000ml of water and mix until the particles are dissolved (Powder concentration can be altered as per required viscosity.)
- Allow the solution to stand until a working viscosity is formed.
- While mixing, avoid adding air bubbles to the water/ couplant.
- Using warm water to prepare the suspension will help the product mix faster.

Usage Instructions:

NDT Method	Ultrasonic Testing
Carrier Media	Water
To be used with	Ultrasonic testing Machine, transducer
Recommended usage	0°C to 75°C (32°F to 167°F)
Recommended Dilution	50 g/l in water for an optimum viscosity
Compatibility	Most Composites & Metals

Gel Removal:

The product features easy removability using water, although it is recommended to remove couplant immediately after inspection and before the couplant dries. Rinse with water or a combination of water rinse and brushing.

Safety:

Ultrasonic testing is usually safe when conducted by trained professionals who follow appropriate safety measures. Wear appropriate safety gears while using the product. Please refer materials safety datasheet before use.

Storage:

Store the product in an airtight container, completely free from moisture.

Shelf Life:

Five (5) Years when closed containers are stored in a clean, dry environment away from excessive heat and cold.

Packaging:

- 1kg container for powder.
- 500ml bottle for gel.

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