



CGM CIGIEMME S.p.A.

Controlli Non Distruttivi - Non Destructive Testing



Product Code
01049064

Ref. no.
U55

**Product Data
Sheet**

POWDER U 55+AC

PRODUCT DESCRIPTION

U 55+AC is a powder used for the preparation of a transparent, water-based coupling gel; the viscosity can be adjusted according to the amount of water used. The gel obtained is suitable for the most common applications under normal conditions for both defect and thickness inspection.

COMPOSITION

Nitrite-free and low in sulphur and halogens (< 50 ppm). Being glycerine-free, it complies with FAA AC 25-29. It contains anti-corrosive so as not to affect the surfaces under inspection.

N.B.: Like all CGM materials, U 55+AC is tightly controlled to ensure batch uniformity, optimal process verification and control reliability.

SPECIFICATIONS

- Excellent solubility in water.
- It provides an excellent coupling, suitable for use on different types of surfaces, with excellent lubricating properties for ultrasonic transducers.

PACKAGING TYPE

- 200 g envelope plastic bags
- 5 kg envelope plastic bags

APPLICATIONS

Couplants are used for ultrasonic NDT inspections to facilitate the transmission of sound energy between the probe and the workpiece.

Their use is necessary since sound energy, at the frequencies that characterise ultrasound used in non-destructive testing, is not transmitted into the air with satisfactory intensity for UT testing. A very thin layer of air between the probe and the workpiece is enough to compromise transmission.

INSTRUCTIONS FOR USE

- Homogenise the contents of the bag.
- Take the necessary quantity of powder according to the quantity of paste and the relative viscosity to be obtained: 200 g of powder in 6 litres of drinking water is recommended to obtain a gel of medium viscosity (check the anti-corrosive capacity in case of higher dilution).
- Mix until completely dissolved.
- Wait for the paste to form (30/40 minutes).
- Mix again until the product is completely homogenised.
- Store in a closed container.
- Apply evenly to the surface to be inspected by ultrasonic testing.
- If necessary, remove with cloths or water at the end of the inspection.



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BENEFITS

- Suitable for use in the petrochemical, automotive, aerospace and railway industries.
- The preparation of the paste is simple and does not require long mixing times.
- The presence of anti-corrosives prevents oxidation, so it is not essential to remove the gel after inspection.
- Suitable for steel, carbon steel, copper and its alloys, aluminium and its alloys, plastics and composite materials.
- Non-toxic to the skin, free of dangerous labeling and not harmful to the environment.

PRODUCT PROPERTIES

	U 45	U 47	U 49	U 51	U 53	U 55+AC
Appearance	Transparent green gel	Transparent gel	Transparent gel	White gel	White gel	Powder for transparent gel
Glycerine content	No	No	Yes	No	Yes	No
Density at 20°	1.03 kg/l	1.00 kg/l	1.00 kg/l	1.03 kg/l	1.03 kg/l	NA
pH	8	7-8	7-8	7-8	7-8	~7
Usage temperature	From -20°C to 120°C	From 5°C to 80°C	From 5°C to 80°C	From 5°C to 80°C	From 5°C to 80°C	From 5°C to 80°C
Recommended dilution in drinking water	From 0 to 1:1	From 0 to 1:1	From 0 to 1:1	From 0 to 1:1	From 0 to 1:1	33 g/L

Typical values.

RECOMMENDATIONS FOR THE USER

NDT method	Ultrasonic testing
Shelf life	3 years at a temperature between 5°C and 45°C, in a dry place out of direct sunlight
Usage temperature	From 5°C to 80°C

COMPLIANCE WITH STANDARDS

- ASME V Art. 5 (T533)
- FAA AC 25-29 (glycerine-free)
- MIL-STD-271
- PMUC (certificate of conformity on request)

HEALTH AND SAFETY

Read all health and safety information before using this product. This information can be found in the Safety Data Sheet, available on request.

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