Corrosion inhibitors

Water is an ideal couplant, however, it causes corrosion of test objects and test equipment.

The couplant additive ECHOKOR protects bare iron and steel surfaces against the attack of neutral and alkaline water and temporarily against atmospheric corrosion.

It also protects non-ferrous metals like copper and brass. Common corrosion protectors reduce the service life of UT probes considerably. Long-term tests, however, show that the use of ECHOKOR does not damage ECHOGRAPH immersion and test system probes, if used with normal concentrations.

ECHOKOR is added in concentrations of 1 up to 2.5 Vol. %. It dissolves easily in water and attacks neither skin nor probes.

ECHOKOR LF is a low-foam anti-corrosion additive and is therefore well-suited for couplant circulation.

ECHOKOR and ECHOKOR LF are indispensable for manual and automatic ultrasonic testing when employing either puddle, immersion or squirter technique.

Order numbers
- ECHOKOR bottle 1 l 9027.001
- ECHOKOR cubitainer 5 l 9027.002
- ECHOKOR barrel 200 l 9027.003
- ECHOKOR LF cubitainer 5 l 9028.002
- ECHOKOR LF barrel 200 l 9028.003

If large quantities are needed ECHOKOR and ECHOKOR LF are also available in 200 l barrels.

Technical and material safety data sheets (MSDS)

For the chemical products ECHOTRACE, ECHOTRACE HT, ECHOFLUID, ECHOKOR and ECHOKOR LF detailed technical information sheets and MSDS are available.

The most recent versions can be downloaded from our homepage (www.karldeutsch.de) under the topic Downloads » Chemical Products.
ECHOGRAPH / ECHOMETER

Accessories and tools for ultrasonic testing

Calibration blocks

The calibration blocks are indispensable for the adjustment and check of ultrasonic instruments:
- Calibration block 1 acc. to EN ISO 2400 (formerly EN 12223)
- Calibration block 2 acc. to DIN EN ISO 7963 (formerly EN 27963)

Also, these calibration blocks are useful for exercises performed to get familiarized with ultrasonic testing. They are delivered in a stable wooden case or a synthetic leather bag.

Order numbers
- Calibration block no. 1 1703.001
- Calibration block no. 2 1702.001

Adjusting standards

Adjusting standards are useful tools for daily verification of the time-base adjustment and for the check of linearity and sensitivity of the ultrasonic instrument.

The adjusting standard is connected like a single element transducer to the transmitter socket of any ultrasonic instrument and provides an echo sequence of at least 10 clearly separated short ultrasonic pulses in distances of 50 or 100 mm steel (c = 5920 m/s), depending on model.

The adjusting standards come with a cable of 1.2 m length and a Lemo 1 plug type.

Order numbers
- Standard with 50 mm echo sequence 1842.001
- Standard with 100 mm echo sequence 1842.002

Step wedge

Useful tool for adjustment and instrument check with wall thickness measurement:
- Step wedge 2 – 25 mm (steel)
  - with following steps:
    - 2, 4, 8, 12, 16, 25 mm ± 0.05 mm
    - Contact surface of the steps: 20 x 20 mm²
- Step wedge 2 – 10 mm
  - with following steps:
    - 2, 5, 10 mm ± 0.05 mm
    - Contact surface of the steps: 15 x 25 mm²

Order numbers
- Step wedge 2 – 25 mm 1713.001
- Step wedge 2 – 10 mm 1713.002

ECHOTRACE high temperature couplant

The special couplant ECHOTRACE HT is a temperature-resistant grease based on silicone oil enabling measurements on objects with surface temperatures between -40 °C and 290 °C.

Order number
- ECHOTRACE HT tube 100 g 9000.005

ECHOFLOW is an odourless liquid with a viscosity similar to oil. However, it provides better coupling compared to other liquids. ECHOFLOW is recommended especially for higher sound frequencies and wall thickness measurements. It can be removed residue-free, provides excellent corrosion protection and is skin-friendly.

Order numbers
- ECHOFLOW bottle 0,1 l 9004.001
- ECHOFLOW bottle 1 l 9004.002
- ECHOFLOW cubitainer 10 l 9004.003
- ECHOFLOW barrel 200 l 9004.005

ECHOTRACE is non-drip and well-suited for overhead applications.

ECHOTRACE is free of silicone and nitrite. It is non-aggressive, so also painted surfaces and plastics can be inspected without concern.

ECHOTRACE can be removed with water and leaves no residues. The permissible temperature range covers 0 °C to +80 °C.

Order numbers
- ECHOTRACE tube 100 ml 9000.004
- ECHOTRACE bottle 500 ml 9000.003
- ECHOTRACE cubitainer 5 l 9000.002
- ECHOTRACE barrel 200 l 9000.006

Uniform echo sequence with adjusting standard (example)

Various package sizes for ECHOTRACE: Indispensable for manual contact testing

ECHOTRACE is a water-based gel with ideal ultrasonic properties and achieves better acoustic coupling compared to e.g. oil, grease or water. It contains anticorrosives, is dermatologically neutral and non-inflammable.

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## ECHOGRAPH / ECHOMETER

**Accessories and tools for ultrasonic testing**

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<tr>
<th>Accessories</th>
<th>Description</th>
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| **Calibration blocks** | The calibration blocks are indispensable for the adjustment and check of ultrasonic instruments:  
  - Calibration block 1 acc. to EN ISO 2400 (formerly EN 12223)  
  - Calibration block 2 acc. to DIN EN ISO 7963 (formerly EN 27963)  
  Also, these calibration blocks are useful for exercises performed to get familiarized with ultrasonic testing. They are delivered in a stable wooden case or a synthetic leather bag. | Calibration block no. 1 1703.001  
 Calibration block no. 2 1702.001 |
| **Adjusting standards** | Adjusting standards are useful tools for daily verification of the time-base adjustment and for the check of linearity and sensitivity of the ultrasonic instrument.  
The adjusting standard is connected like a single element transducer to the transmitter socket of any ultrasonic instrument and provides an echo sequence of at least 10 clearly separated short ultrasonic pulses in distances of 50 or 100 mm steel \( c_s = 5920 \text{ m/s} \), depending on model.  
The adjusting standards come with a cable of 1.2 m length and a LeMo 1 plug type. | Standard with 50 mm echo sequence 1842.001  
 Standard with 100 mm echo sequence 1842.002 |
| **Step wedge** | Useful tool for adjustment and instrument check with wall thickness measurement:  
  - Step wedge 2 – 25 mm (steel)  
  with following steps:  
    2, 4, 8, 12, 16, 25 mm ± 0.05 mm  
  Contact surface of the steps: 20 x 20 mm²  
  - Step wedge 2 – 10 mm (steel)  
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    2, 5, 10 mm ± 0.05 mm  
  Contact surface of the steps: 15 x 25 mm² | Step wedge 2 – 25 mm 1713.001  
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| **Ultrasonic couplant** | The couplant ECHOTRACE is a water-based gel with ideal ultrasonic properties and achieves better acoustic coupling compared to e.g. oil, grease or water. It contains anticorrosives, is dermatologically neutral and non-inflammable.  
ECHOTRACE is non-drip and well-suited for overhead applications.  
ECHOTRACE is free of silicone and nitrite. It is non-aggressive, so also painted surfaces and plastics can be inspected without concern.  
ECHOTRACE can be removed with water and leaves no residues. The permissible temperature range covers 0 °C to +80 °C. | ECHOTRACE tube 100 ml 9000.004  
 ECHOTRACE bottle 500 ml 9000.003  
 ECHOTRACE bucket 3 l 9000.001  
 ECHOTRACE cubitainer 5 l 9000.002  
 ECHOTRACE barrel 200 l 9000.006 |
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**ECHOTRACE**

- **ECHOTRACE high temperature couplant**
  - Suitable for the inspection on hot surfaces.
  - Order number ECHOTRACE HT tube 100 g 9000.005

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**ECHOTRACE HT**

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**ECHOFLOW**

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