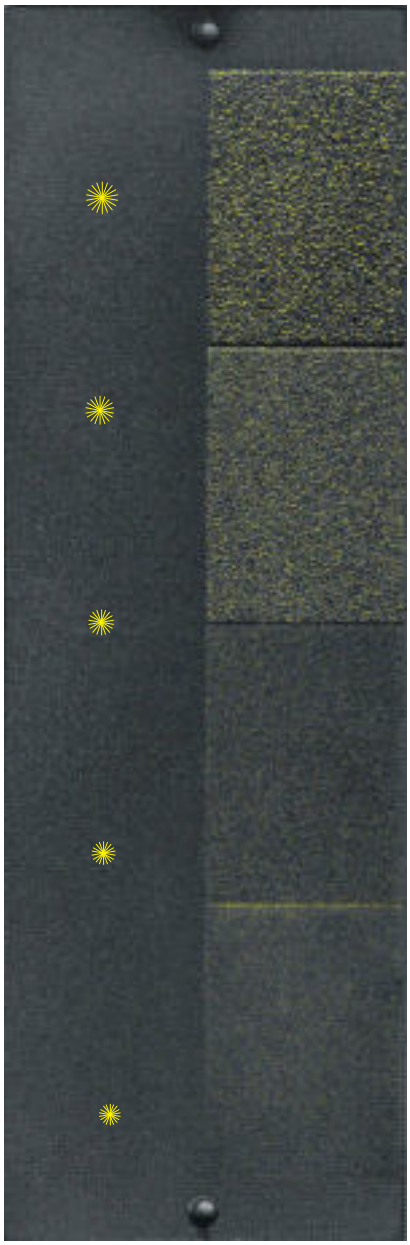
Description, Application and Handling of the Test Block No. 2 acc. to EN ISO 3452-3 (Order No. 9992.100)

Introduction: The test block no. 2 according to EN ISO 3452-3 is used for regular performance checking of dye penetrants and fluorescent penetrants in opened, partially used containers and stationary testing systems.

Description: The test block no. 2 follows the concept of the American test block PSM 5 (Penetrant System Monitor). The test block is a stainless steel plate. Half of the test surface is coated with hard chromium. The other half of the test surface is divided into four areas of different roughness (Ra = 2.5, 5, 10, and 15 µm) to allow a checking of the excess penetrant removal. The chromed area has five star-shaped cracks of different size (3, 3.5, 4, 4.5, and 5.5 mm diameter). These star-shaped cracks were produced by pressing a ball into the rear side with varying force.



test block no. 2 according to DIN EN ISO 3452-3

Application: The penetrant to be checked is applied onto the entire surface of the test block no. 2 by immersing, spraying, or brushing. After the prescribed penetrant dwell time (usually 10 minutes), the excess penetrant is removed: a) by rinsing it off with water or b) by wiping it off with a clean, lint-free wiping material, barely dampened with cleaner KD-Check PR-1 or PR-2. Afterwards, the surface is dried. Finally, the developer (KD-Check SD-1 or DD-1) is applied. After 5 to 10 minutes, the evaluation is carried out (the inspection conditions according to ISO 3059 must be considered). In the left part of the test block the judgement is based on the number of visible star-shaped cracks. The right part is used to check the excess penetrant removal by evaluating the amount of remaining penetrant within the rough areas.

Important hints for application:

- The test block no. 2 is meant for the user of the penetrant as an instrument to check the performance of the penetrant system in use. With this test block, the sensitivity class of a penetrant system cannot be determined. In addition, two different penetrants cannot be compared concerning their sensitivities.
- Make sure that the test results are always obtained under the same testing and inspection conditions (penetration time, excess penetrant removal, developer, UV-source, viewing distance, daylight intensity).

Handling, cleaning, maintenance: The indications of the test block no. 2 may be reduced by pollution or mechanical influences. Please, observe the following hints to secure a reliable operation:

- For a correct indication, the test block must be free from dirt, oil or grease and residual penetrant from former checks. The test block should carefully be cleaned before and after each use and, if applicable, the surface should be inspected under UV irradiation. The test block no. 2 must carefully be cleaned especially immediately after use (recommendation: ultrasonic cleaning in acetone), as it tends to gather penetrant residuals within the flaws.
- By a mechanical shock (e.g. falling down), the star-shaped flaws probably can be altered. In such a case, a repair will not be possible. We therefore recommend to handle the test block as carefully as possible. Furthermore, engravings or impact stamps must not be applied.

Hints for the regular control of the test block: Before delivery, the performance of each test block no. 2 is checked and documented in our company. Upon request, KARL DEUTSCH can also carry out the prescribed periodical checks for you.