

Approvals and conformities

ASME
ISO 3452-2
AMS 2644

MANUFACTURER: Sherwin Inc. (USA) / NDT-Europa (NL)

DESCRIPTION / APPLICATION(S):

Type 2, Method A (water-washable) and Method C (solvent removable), Level 2, red dye penetrant, as per SAE-AMS 2644 and ISO 3452-2 standard.

Companion products : Cleaner : N 120, N106A, DR-60, DR-62

Wet developer : D-100, R60, D-106

DIRECTIONS FOR USE

Surface must be free of contaminants, **even inside flaws**. Use adequate methods to remove oxides, paints, oils, water, etc...

Prior to applying penetrant, wipe out with degreaser N 120 or DR-60 and rags. Allow 2 minutes for complete evaporation.

Apply penetrant by any adequate means (spraying, brushing, flowing, dipping, etc...)

Dwell time:

20 minutes are recommended. Dwell time may be shortened down to 10 minutes when only large cracks are sought for, or extended up to several hours for tight cracks.

Excess of penetrant removal:

This is a delicate operation. Remove the excess penetrant from the surface, being careful not to remove the penetrant trapped in the defects. DP-51 is easy to wash off with sprayed water; never dip the parts in water. Rinse under low pressure (30 to 150 kPa), with the nozzle of gun 30 to 40 cm from the part, during the shortest time possible, until the red background disappears. If a red background remains on particularly coarse parts, clean it off with a N106A wipe or DR-60, then rinse again within 30 seconds. If you can't or don't want to use water, carry out the following procedure (and not any other).

- Wipe off the excess of penetrant from the surface using clean rags.
- Using rags lightly moistened with N106A or DR-60, wipe again.

- As a final step, wipe with clean, dry rags.

Drying:

After rinsing, dry either through natural evaporation, or preferably through hot air circulation (80°C maximum). If you wipe the part, do so with clean rag that is not too absorbing, preferably by dabbing the part.

Applying the developer:

When moisture has evaporated, apply one of the mentioned developers (spray only).

Inspection:

Some 10 minutes after the developer has dried, you may inspect the part: the defects appear on the white background in the form of red spots (blowholes, porosities, etc.) or red lines (cracks, defective welds, shocks, etc.). Longer development time (30 minutes, and even perhaps several hours) can allow you to detect extremely small defects.

Viewing conditions:

Parts shall be inspected as per ISO 3059 standard requirements.

Inspection is better off when using a “cool white” light, colour temperature being more than 4500K and colour rendition index more than 80 or light with an illuminating index of D65. It is recommended NOT TO USE undervoltaged incandescent bulbs, as it often happens with battery-operated units, this giving a yellowish light.

TECHNICAL CHARACTERISTICS

This high sensitivity penetrant is very low in sulfur, fluorine, chlorine, bromine.
Compatible with any metal and some synthetic materials.

Appearance red liquid
Flash point > 99°C

PRECAUTIONS FOR USE AND STORAGE

Transport / Handling: Refer to Material Safety Data Sheet (MSDS).

Storage: Keep away from moisture.

Temperature range: 0°C à 50° C

Keep packaging closed after taking out some of the product

1 Date : 07-07-2017 Written and checked by : F. Héron

This technical data sheet replaces and cancels the previous one.

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