

SKL-SP2

Solvent-Removable Visible Penetrant



SKL-SP2 is a solvent removable visible red dye penetrant. SKL-SP2 locates surface-breaking discontinuities with a simple three-step process that is ideal for basic industrial nondestructive testing. SKL-SP2 features high-performance penetrating characteristics and produces clear vivid red indications.

SKL-SP2 is a reliable penetrant testing method for preventative maintenance and quality checks. It is used to inspect welds, forgings, pressure vessels, castings, general metalwork and can be used in leak testing applications.

BENEFITS

Fastest inspection processing

- A convenient and easy-to-use solution for preventative maintenance and control checks.
- Quickly and completely covers the entire test surface due to high surface wetting.
- Remove excess penetrant without water to eliminate the need to dry parts before applying developer.

Dependable and convenient to use

- Easy to carry and use in the field with the convenient aerosol cans which are carefully designed for consistent, even coverage and maximum test area coverage
- Use in all conditions without the need for darkness or UV lights.

Wide application versatility

- Inspect a wide range of components without fear of corrosion.
- Meets AMS 2644 and is NDT-approved for professional industrial applications

Maximum indication detection

- Produces strong, vibrant indications thanks to the bright, vibrant red color, especially when used with SKD-S2 solvent-based developer

Maximise operator comfort and safety

- Promotes better inspection quality by providing the operator with a more comfortable work environment.
- Reduces discomfort from strong odours.
- Exceeds all EHS requirements, does not contain NPEs or phthalates

SPECIFICATION COMPLIANCE

- AMS2644
- ASME BPVC-V
- ASTM E165/E165M
- ASTM E1417/E1417M
- EN ISO 3452-1
- EN ISO 3452-2 (Sensitivity Level 2)
- MIL-STD-2132

SKL-SP2

FEATURES

- Outstanding penetrating characteristics
- Vivid, high-contrast red colour
- Superior flaw resolution
- Excellent reliability
- Wide range of applications
- Solvent removeable
- ISO 3452 sensitivity level #2
- Can be used for Method B, Method C and Method D
- Simple, easy-to-use process
- Good surface wetting
- Optimised capillary action
- Works in visible light
- Very low toxicity
- Low odour
- NDT-spec compliant

APPLICATIONS

Defect location: open to surface

Ideal for:

- Castings
- Forgings
- Welds
- Pressure vessels
- Tubular goods
- General metal work
- Leak testing
- Use in power plants
- Construction applications.

Defect examples:

- Cracks
- Leaks

COMPOSITION

A blend of petroleum distillates, plasticiser and an oil-soluble organic red dye.

PRODUCT PROPERTIES

Form and colour	Red liquid
AMS 2644 class	Type 2, Method B/C/D
Flash point	> 93°C (bulk product)
Density	0.85 g/cm ³
Viscosity	3.8 mm ² /s
Corrosion	Meets AMS 2644

Like all Magnaflux materials, our visible penetrants are closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

USER RECOMMENDATIONS

NDT Method	Penetrant Testing, Visible
Storage temperature	10°C to 30°C
Usage temperature	5°C to 55°C (bulk) -5°C to 50°C (aerosol)
Coverage	20 - 30m ² per litre
Cleaner/remover	SKC-S, C10
Hydrophilic emulsifier	ZR-10C
Solvent-based developer	SKD-S2
Water-based developer	ZP-5B

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INSTRUCTIONS FOR USE

NOTE: we do not recommend SKL-SP2 for inspecting plastic materials, as it may stain, soften or even dissolve the base material under test.

Ensure test part is clean and dry, and free from oil, grease and other contaminants.

Apply penetrant by immersion dip, brush, flow on, conventional or electrostatic spray. Cover the test area completely.

Allow penetration time. Minimum penetration time is 2 to 5 minutes, with 10 minutes being adequate for most situations. Lower temperatures thicken the penetrant and require longer penetration times.

Remove excess surface penetrant with a solvent wipe or by the hydrophilic remover method.

Apply a thin layer of developer* to the surface and allow a minimum of 10 minutes development time before inspecting the component under white light. Indications will appear dark red against the white developer background.

* A developer is used to maximise sensitivity and provide a white contrasting background. Two types of developer can be used:

Solvent-based: quick-drying materials which are applied by spraying. The component under test must be dry before developer is applied.

Water-based (aqueous): can be applied by dipping or spraying. To maximise penetrant sensitivity, parts should only be exposed to aqueous developers for short periods of time. The component must be dried before inspection.

Developer residue can be removed either by wiping with a cloth or by a water and detergent wash. Penetrant residues can be removed by vapour degreasing or solvent soak.

Solvent wipe method

Apply penetrant SKL-SP2 to the clean component and allow contact time.

Wipe off excess penetrant with a cloth dampened with cleaner/remover SKC-S.

Dry component, apply developer (SKD-S2 or ZP-5B) and inspect.

Hydrophilic method

Apply penetrant SKL-SP2 to the clean component and allow contact time.

Spray component with water to remove excess penetrant.

Immerse component in hydrophilic remover ZR-10C for the predetermined time.

Spray component with water to remove last traces of penetrant.

Dry component, apply developer (SKD-S2 or ZP-5B) and inspect.

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PACKAGING AND PART NUMBERS



008A016 (x 10)



055C076 (x 4)

SK-3 Penetrant Inspection Kit

The SK-3 Kit is a portable visible penetrant inspection kit that includes the following:

- 2 x 400 ml aerosol cans of SKL-SP2 penetrant
- 3 x 400 ml aerosol cans of SKC-S cleaner
- 3 x 400 ml aerosol cans of SKD-S2 developer
- 1 cloth
- 1 set of instructions
- 1 portable carrying case

The SK-3 kit is available as:

- Complete SK-3 kit - part number 008A038
- Carrying case only - part number 053C009

HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the Safety Data Sheets, which are available at www.magnaflux.eu.