

Product Data Sheet

SKL-SP1 Spotcheck® red penetrant

General Description

Spotcheck SKL-SP1 is a solvent removable (or post emulsifiable) red colour contrast penetrant. SKL-SP1 exhibits outstanding penetrating characteristics which provide for maximum reliability in locating surface-open flaws and discontinuities.

It can be used over the entire spectrum of industrial applications, where a visible penetrant inspection system meets the requirements for surface-open flaw detection.

Typical applications include castings, forgings, leak testing, welds and general metal work. SKL-SP1 has also been successfully used on non-porous ceramics and similar materials. However it is not recommended for the inspection of plastic materials, as it may stain, soften or even dissolve the base material under test.

Composition

SKL-SP1 is composed of a blend of petroleum distillates, plasticiser and an oil soluble organic red dye.

Advantages

- ✓ Excellent Colour Contrast
- ✓ Detects a wide range of surface defects
- ✓ Cost effective & easy to use

Typical properties (Not a specification)

Property	SKL-SP1
Colour	Dark Red
Odour	Bland
Flash point	> 93°C
Density	0.85 g/ml
Viscosity @ 38°C	3.3 cS
Corrosion	Meets AMS 2644
Sulfur Content	< 300 ppm
Chloride Content	< 300 ppm
Fluoride Content	< 50 ppm
AMS 2644 Class	Type 2 Method C
AMS 2644 Sensitivity	N/A
EN ISO 3452-2 Designation	Type II Cd-2

Like all MAGNAFLUX materials, SKL-SP1 is closely controlled to provide unique batch to batch consistency & uniformity to assure optimum process control and inspection reliability.

Method of Application

Test parts must be clean & dry, free from oil grease or other foreign contaminating substances before penetrant is applied. SKL-SP1 can be applied by immersion dip, brush, flow on, conventional or electrostatic spray.

Whichever method of application is used, the test area must be completely covered with penetrant.

Penetration Time and Temperature

The generally accepted minimum penetration time is 2 to 5 minutes. 10 minutes being adequate for most situations, although specific process specifications may require longer.

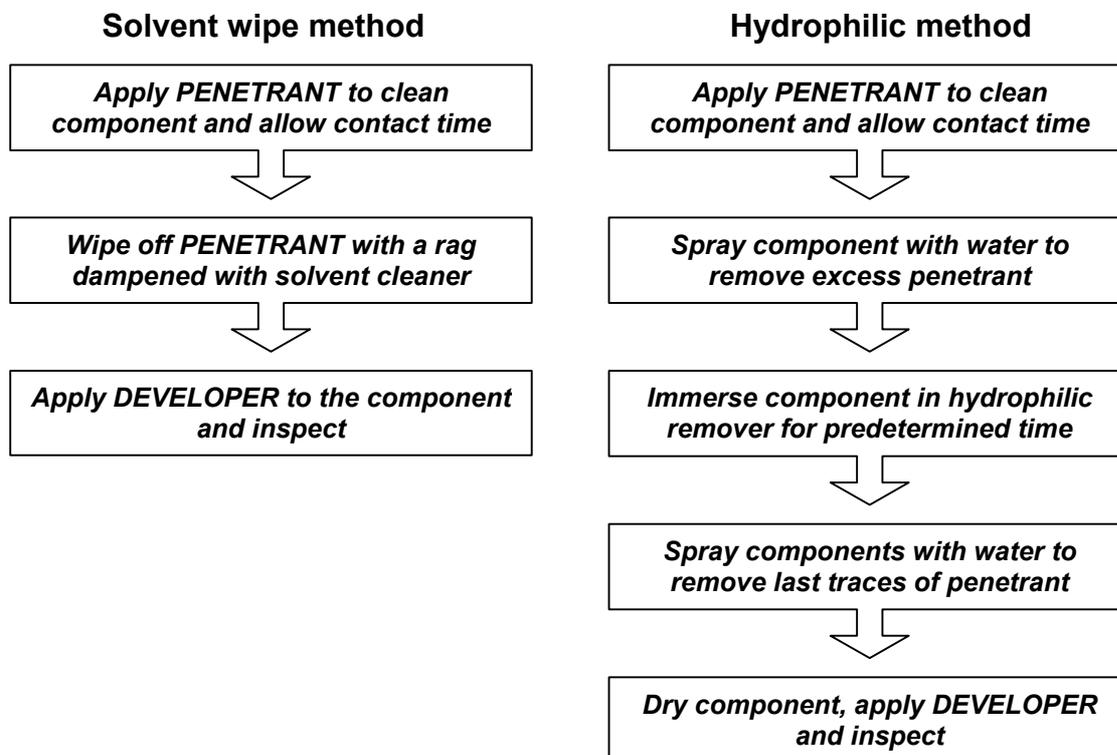
SKL-SP1 should be used at temperatures between 2 °C and 65 °C.

Lower temperatures thicken the penetrant and longer penetration times are necessary.

High temperatures should be avoided since this can lead to the breakdown of the dye resulting in colour fade.

Penetrant removal

SKL-SP1 excess surface penetrant can be removed either by solvent wipe or by the hydrophilic remover method.



Developing

A developer is used to maximise the sensitivity and to provide a white contrasting background against which the red indications can be readily seen. Two types of developer can be used.

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

Water based developers can be applied by dipping or spraying, after application the component must be dried before inspection.

Note : To maximise penetrant sensitivity, parts should not remain in aqueous developers for any length of time.

Allow a minimum of 10 minutes development time before inspecting the component under white light where Indications if present, will appear dark red against the white developer background.

Recommended Cleaners / Emulsifiers / Developers for SKL-SP1.

PRE-CLEANERS		EMULSIFIERS		DEVELOPERS	
SKC-S	<i>Solvent</i>	ZR-10B	<i>Hydrophilic</i>	SKD-S2	<i>Solvent</i>
MagnaVu	<i>Aqueous</i>	ZR-10C	<i>Hydrophilic</i>	ZP-5B	<i>Aqueous</i>

Post Cleaning

Post cleaning of the tested component can be carried out if required, by an appropriate Technique. Developer residues 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.

Specification compliance

Specification	SKL-SP1
<input type="checkbox"/> AMS 2644	✓
<input type="checkbox"/> EN ISO 3452-2	✓
<input type="checkbox"/> ASME B & PV Code, Sec V	✓
<input type="checkbox"/> EN 571-1	✓
<input type="checkbox"/> ASTM E 1417	✓
<input type="checkbox"/> ASTM E-165	✓
<input type="checkbox"/> MIL STD 271	✓

SKL-SP1 is available in 400 ml aerosols & 4 X 5 Lt packs

Coverage

1 lt covers approximately 30 - 40 square metres
1 aerosol covers approximately 12 - 16 square metres

Safety

Safety data sheets for this product are available on request.
Read the relevant safety data sheets before use.

Avoid contact with skin and eyes.
Avoid breathing spray mists.
Wear suitable gloves and eye protection if there is a risk of skin or eye contact.