



# SPOTCHECK SKL-SP1

## SOLVENT REMOVABLE 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.

SKL-SP1 can be used over the entire spectrum of industrial applications, where a visible penetrant inspection system meets the requirements for surface-open flaw detection.

### Applications

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.



### Typical Properties (not a specification)

Property	SKL-SP1
Colour	Dark red
Odour	Bland
Flash point	> 93 °C (bulk product)
Density	0.845 g/cm <sup>3</sup>
Viscosity	3.4 mm <sup>2</sup> /s
Corrosion	Meets AMS 2644
Sulfur content	< 1000 ppm
Chloride content	< 1000 ppm
AMS 2644 class	Type 2 Method B, C, D

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

### Benefits

- ✓ Outstanding penetrating characteristics
- ✓ Broad range of applications



### Pre-cleaning

Test parts must be clean and dry, and free from oil, grease or other foreign contaminating substances before penetrant is applied. To clean the surface we recommend the use of the Magnaflux cleaner Spotcheck SKC-S or SKC - I.

### Method of Application

Penetrants 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 10 minutes. However, specific process specifications may require longer penetration times.

SKL-SP1 should be used at temperatures between 5 °C and 55 °C.

Please note: Lower temperatures thicken the penetrant and longer penetration times will then be necessary.

### Penetrant Removal

SKL-SP1 excess surface penetrant can be removed by either SKC-S or SKC – I (Method C), ZE-4B (Method B), or ZR10B (Method D).

### 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 Cleaner/Remover/Developers for SKL-SP1

Product type	Product name	Type
Pre-cleaner	Spotcheck SKC-S	Solvent based
	Spotcheck SKC-I	Solvent based
Remover	Spotcheck SKC-S	Solvent based
	Spotcheck SKC-I	Solvent based
Emulsifier	Zyglo ZR-10C	Hydrophilic
	Zyglo ZE-4B	Lipophilic
Developer	Spotcheck SKD-S2	Solvent based
	Zyglo ZP-5B	Aqueous
	Zyglo ZP-9F	Solvent based



### 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
ASME B & PV Code, Sec V	✓
ASTM E-165	✓
ASTM E-1417	✓
IS-3658	✓
Nuclear power Corporation of India Limited	✓

### Availability

SKL-SP1 is available as follows:

- Aerosols, part number F01002
- 1 litre containers ,part number F01001

### Coverage

1 aerosol covers approximately 4-5 square metres.

### Health and Safety

- Safety Data Sheets for this product are available on request from your Magnaflux distributor or via the Magnaflux website ([www.in.magnaflux.com](http://www.in.magnaflux.com)).
- Read the relevant Safety Data Sheets before use.

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