

ARDROX[®] 9D1B

Form d, non-aqueous, AMS 2644 approved inspection developer

PRIMARY APPLICATION

ARDROX[®] 9D1B is a liquid product consisting of finely divided white powder dispersed in a non-halogenated volatile solvent system.

ARDROX 9D1B is used with Type I (fluorescent) and Type II (visible) penetrants.

CHEMICAL CHARACTERISTICS

Appearance	Milky white suspension
Density	Approximately 7.32 lbs/gal (0.88 g/ml)
Flash point	0°F PMCC
VOC	801 g/ltr
Vapor pressure	130 mm Hg
Sulfur content	<1000 ppm
Halogen content	<1000 ppm

APPROVALS

Please contact your Chemetall Representative for full list of product Approvals.

METHOD OF USE

After thorough cleaning, penetrant application, penetrant removal and drying, ARDROX 9D1B is applied by spraying it on the surface (air spray gun or aerosol). Apply as follows:

Thorough Mixing

ARDROX 9D1B must be thoroughly mixed both before and during use. It is a suspension of a finely divided powder in a solvent and the powder settles out during storage and in use, unless agitated.

Correct Film Thickness

The function of the developer is to draw penetrants in defects to the surface, to allow some spread of the penetrant into the developer film and to provide good color contrast between red penetrant and the surrounding area. Too heavy of a film of developer will tend to mask indication from fine defects. Too light a film will fail to develop indications sufficiently and to provide enough color contrast. The correct film thickness can usually be obtained by making three or four passes with the spray gun or aerosol over the area being inspected from a distance of 6 to 12 inches. The aim is to produce a thin, even, white coating which just obscures the surface. The correct technique, although difficult to describe, is usually quickly acquired with practice.

Adequate Ventilation

Adequate ventilation is needed to prevent vapor buildup because the vapors are flammable.

Inspection and Interpretation

Inspection is carried out in daylight or good quality artificial light when red dye (Type II) penetrants are used. When ARDROX 9D1B is used with a fluorescent penetrant, inspection is carried out in an inspection darkroom, or darkened area, using UVA (365nm) illumination. A line indicates defects such as cracks, lap cold shuts and forging bursts. If the defect is very tight, a dotted line may be seen. Porosity, shrinkage, lack of bond and leakage will show as dots or as areas of color. Deep short cracks show as round indications. Since penetrant from defects tends to spread through the developer film, the size of the colored area surrounding each defect gives some idea of the relative size of that defect. Larger defects contain a large volume of penetrant which spreads over a larger surrounding area. Sometimes the original path of the defect is obscured by the surrounding colored region.

SAFETY AND HANDLING

Prior to handling and use of any of the materials referenced in this document, the Material Safety Data Sheets should be read and understood by all personnel in contact with these materials.

KEEP OUT OF REACH OF CHILDREN

STORAGE

Dry, indoor storage is recommended, away from any incompatible materials referenced in the Material Safety Data Sheets. All containers should be tightly closed when not in use.

SHELF LIFE

The shelf life for ARDROX 9D1B is 3 years.

DISPOSAL

Any disposal of the materials referenced in this document should be in accordance with all applicable federal, state, and local regulations. The process solution can contain components other than those present in the materials as supplied. Analysis of process solutions may be required prior to disposal.

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