

Approvals and conformities

ASME
AMS 2644
ASTM-E-1417
ASTM-E-165
MIL-I-25135
MIL-STD-271 E
MIL-STD 6866

MANUFACTURER : SHERWIN (USA)/NDT EUROPA (NL)

DESCRIPTION / APPLICATIONS :

Powdered mixture of white particles, inhibitors and wetting agents which is mixed before use with water to form a suspension of white particles. After application, it dries to a uniform white powder coating, and, under black light inspection, reveals the location of cracks, pores, and similar flaws.

Companion materials :

- All penetrants Type I, method A, B, C et D
- Emulsifier ER-83A (method D) or ER-85 (method B)
- Removers DR-60 or DR-62

DIRECTIONS FOR USE

These instructions describe the basic process. They may be amended by the user to comply with applicable specifications and/or inspection criteria provided by the contracting agency.

Mixing : Mix the dry powder with water (500 g pour 4 L). Always add the powder to water while stirring the water. Warm water speeds the dissolution. Allow 3-4 hours for complete dissolution.

Solution maintenance : monitor solution concentration with hydrometer readings. The specific gravity for 40 g of **D-110A.1** / liter at 15 °C equals 1,025 ; for 60 g / liter equals 1,038 ; for 120 g / liter equals 1,070. The suspension can be adjusted by adding more **D-110A.1** powder or by adding more water. Some water loss through evaporation is inevitable so the solution will require monitoring and periodic adjustment.

Avoid contaminating the **D-110A.1** suspension with fluorescent penetrant. To prolong solution life, it is important to remove as much excess surface penetrant as possible before immersing a part in the **D-110A.1** suspension.

It is recommended to use a bactericide to cancel micro-organism growth.

Use : Briefly immerse parts in **D-110A.1** suspension immediately following the removal of excess surface penetrant, and before drying. Brief immersion is especially critical with water washable penetrants. Allow excess developer to drain for a few seconds before drying.

Drying : After immersion, completely dry the part in a recirculating oven set no higher than 71°C, or according to governing specifications. Allow the parts to remain in the dryer somewhat longer than it actually takes to dry the developer ; heat helps drive flawtrapped penetrant to the developer-coated surface.

Removal : After the parts have been examined under black light for flaws, **D-110A.1** powder may be removed with a pressurized water wash.

TECHNICAL CHARACTERISTICS

Very low sulfur and halogen content
No flashpoint

PRECAUTIONS FOR USE AND STORAGE

Transport / Handling : refer to material safety data sheet (MSDS).

Storage : Keep away from moisture.

Limits of temperature : 0 to 50° C.

Keep packs sealed when unused.

This technical data sheet replaces and cancels the previous one.