

# D-106 DEVELOPER

Approved Form d, MIL-I-25135 Rev. E; and Form d & e, AMS-2644



## PRODUCT INFORMATION

**Description:** D-106 developer consists of refined white particles suspended in acetone to give enhanced sensitivity for locating tight, incipient flaws. By solvent and capillary action, it pulls flaw-entrapped penetrant to part surfaces for display against a white background.

D-106 may be used with both visible and fluorescent penetrants.

The product meets low sulfur, halogen, and sodium requirements. D-106 meets MIL-I-25135 and AMS-2644 requirements.

**Special Features:** When sprayed on a part, D-106 lays on the surface in a thinner, more uniform, more absorbant coat to give more reliable performance. It has superior suspension properties, and is removed easily by light brushing or water rinse.

D-106 works well on smooth or rough surfaces as well as on machined or coated surfaces.

### Companion Materials:

Penetrants -	All Sherwin visible and fluorescent penetrants equivalent MIL-I-25135/AMS-2644 penetrants
Emulsifiers -	Sherwin <b>ER-83A</b> Hydrophilic Emulsifier (method D) Sherwin <b>ER-85</b> Lipophilic Emulsifier (method B)
Removers -	Sherwin <b>DR-60</b> (Class 2) Sherwin <b>DR-62</b> (Class 2) equivalent MIL-I-25135/AMS-2644 removers

<b>Container Sizes:</b>	case of 12 aerosol cans one-gallon cans case of 4 one-gallon cans
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**Basic Instructions:** (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.)

Spraying is the only recommended method of applying D-106. Proper application is essential for high sensitivity performance.

- Application:** D-106 should be applied to thoroughly dry parts from which excess surface penetrant has been removed by a pre-wash step, an emulsifier/wash step, or by wiping. After agitating the D-106 suspension, evenly spray a light, slightly wet coating of developer onto the dry surface of a part. An overly wet application will blur indications; an overly dry application lacks full developing action. Two or three light applications work better than a single heavy application. Too heavy an application may conceal indications.

D-106 is supplied in aerosol spray cans. It also comes in bulk. Apply bulk D-106 at 15-30 pounds pressure with a paint spray type gun equipped with a vaporizing tip. The pressure pot or tank should have a stirrer to suspend the developer particles uniformly, and air lines should have water filters and air dryers.

- Developing and Inspection:** D-106 dries rapidly and draws flaw-entrapped penetrant back to the surface using solvent and capillary action. Flaw marks begin appearing instantly under plain or black light, depending on which penetrant is being used. Five minutes or more should elapse before making final interpretations. ASTM-E-1417 specifies minimum developing time as ten minutes and maximum as one hour.

### Applicable Specifications:

MIL-I-25135 Rev. E  
ASME B & P Vessel Code  
Navships 250-1500  
AMS-2644

ASTM-E-1417  
MIL-STD-271 E  
AMS-2647  
ASTM-E-165

AECL  
MIL-STD 6866  
RDT-F3-6T

OVER FOR PRECAUTIONARY INFORMATION

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