

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 ER-83A Hydrophilic Emulsifier (method D) Sherwin ER-85 Lipophilic Emulsifier (method B)
Removers -	Sherwin DR-60 (Class 2) Sherwin DR-62 (Class 2) equivalent MIL-I-25135/AMS-2644 removers

Container Sizes:	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.

1. **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.

2. **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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SHERWIN
INCORPORATED

5530 Borwick Ave.
South Gate, CA 90280
(562) 861-6324
FAX (562) 923-8370

PRODUCT INFORMATION

DESCRIPTION: D-106 is a color developer for use in the processing of color film and color prints. It is a liquid, colorless to light yellow, with a strong odor of ammonia. It is highly flammable and should be handled with care.

CAUTION: D-106 is highly flammable. It should be stored in a cool, dry place, away from heat and open flames. It should be handled with care to avoid contact with skin and eyes.

USE: D-106 is used in the processing of color film and color prints. It is used in a solution with other chemicals, and the solution is used to develop the film or print.

STORAGE: D-106 should be stored in a cool, dry place, away from heat and open flames. It should be stored in its original container, which is labeled with the product name and hazard information.

SAFETY: D-106 is highly flammable. It should be handled with care to avoid contact with skin and eyes. It should be stored in a cool, dry place, away from heat and open flames.

First Aid: In case of contact with skin, wash with plenty of water. In case of contact with eyes, flush with plenty of water for at least 15 minutes. If inhaled, move to fresh air. If swallowed, do not induce vomiting. Seek medical attention immediately.

Fire: D-106 is highly flammable. It should be stored in a cool, dry place, away from heat and open flames. It should be handled with care to avoid contact with skin and eyes.

Spill: In case of a spill, eliminate all sources of ignition, stand by with fire extinguisher, and contact authorities. Never puncture, heat, or burn spray cans: store at less than 120°F; keep out of direct sun.

Disposal: D-106 should be disposed of in accordance with local, state, and federal regulations. It should not be poured down the drain or into the environment.

Transportation: D-106 should be transported in accordance with local, state, and federal regulations. It should be labeled with the product name and hazard information.

Regulatory: D-106 is regulated under the Hazardous Materials Regulations (HMR) of the Department of Transportation (DOT). It is classified as a flammable liquid, Class 3.

Environmental: D-106 is not expected to pose a significant risk to the environment. It should be handled with care to avoid contact with skin and eyes.

Research: D-106 is a color developer for use in the processing of color film and color prints. It is a liquid, colorless to light yellow, with a strong odor of ammonia.

Patents: D-106 is a registered trademark of the manufacturer. It is used in a solution with other chemicals, and the solution is used to develop the film or print.

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PRECAUTIONARY INFORMATION

D-106 is highly flammable. Fight small fires with carbon dioxide or dry chemical extinguishers. The greatest hazard is high vapor concentration which can result in fire or explosion, or can anesthetize personnel. Use in well ventilated area. Avoid prolonged or repeated inhalation of vapor. Avoid contact with skin. Do not take internally; if taken internally contact physician. In the event of a spill, eliminate all sources of ignition, stand by with fire extinguisher, and contact authorities. Never puncture, heat, or burn spray cans: store at less than 120°F; keep out of direct sun.