

# Sherwin D-350 Hi-Temp Developer

## Description

D-350 is a hi-temp developer used to enhance penetrant indications on parts at elevated temperatures, temperatures up to 350°F (176.7°C). D-350 is the developer step in a three part high temperature system (KO-17 hi-temp penetrant and a KO-19 hi-temp remover are the other materials of the hi-temp system). D-350 complies with low sulfur and low halogen requirements.

## Special Features

- D-350 can be used to develop indications at elevated temperatures.
- D-350 meets the ASME code qualification procedure compliance.
- D-350 meets the requirements for low sulfur and halogen.

## Why's Sherwin so good?

Sherwin NDT products are market leaders in quality, performance and reliability - a bold statement, but backed up by over 26 critical manufacturer approvals, including Boeing, Airbus, Rolls-Royce, Lockheed-Martin and other OEM's. Together, NDT products provide a non-destructive method of inspecting materials, parts, assemblies, equipment, surfaces and structures often referred to as the 'visible dye penetrant method' or 'colour contrast method' of inspection.

## Technical Data

**Color:** White Suspended Particles  
**Specific Gravity:** 0.79  
**Boiling Point:** 82°C

PRODUCT NAME	Size (ml)	Ea/Pack/Carton Qty	Code
Sherwin D-350 Hi-Temp Developer	400	1/12	SPSD350400



## COMPANION PRODUCTS

Sherwin KO-17 Hi-Temp Penetrant	400	1/12	SPSK017400
Sherwin KO-19 Hi-Temp Remover	400	1/12	SPSK019400

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# Sherwin D-350 Hi-Temp Developer

## Instructions

**Note:** These instructions describe the basic process, but they may need to be amended by the user to comply with applicable specification and/or inspection criteria provided by the contracting agency.

**1. Application:** Apply hi-temp KO-17 penetrant by spray or brush to a limited area. The area to which the penetrant is to be applied should not be too large, so that processing can be completed within penetrant and developer dwell time restraints. The size of the area will vary with inspection temperatures, part geometry, and operator experience.

**2. Dwell:** The penetrant must be allowed to dwell on the part surface to promote the penetrant time to enter any surface flaws. At higher temperatures, penetration occurs more quickly.

107.2°C - 176.7°C	30 seconds
79.4°C - 107.2°C	1-2 minutes
51.7°C - 79.4°C	2-3 minutes
23.9°C - 51.7°C	3-10 minutes
10°C - 23.9°C	10-30 minutes

Allowances must be made for contamination levels and flaw sizes.

**3. Removal:** Wipe the surface with paper or soft clean cloth towels to remove as much KO-17 as possible from the surface part. Spray KO-19 remover directly onto the surface of the part in a thin coat and immediately wipe from the part surface. The part is then wiped with a water saturated towel or cloth to remove the last traces of penetrant. Finally a dry wipe is used to remove any water from the part.

**4. Drying:** Use paper or cloth toweling to dry the part's surface thoroughly. Special drying time before applying developer to heated parts should not be required.

**5. Developing:** D-350 developer should be sprayed on the part surface from a distance of 6-8 inches immediately after the excess penetrant has been removed and the part has dried. Apply a thin even coat, two or three thin coats are preferred to a single, heavy coat.

**6. Inspection:** Observe the surface for defect indication formation while the developer is applied. Final surface examination should begin within a minute or two after developer application. Surface examination should be completed as quickly as practical, and within ten or fifteen minutes.

## Health & Safety

D-350 hi-temp penetrant should be used with adequate ventilation and away from sparks, flame, since it is applied to heated surfaces. Wear protective clothing and equipment. Avoid prolonged or repeated contact with skin. Do not take internally. Consult the MSDS for more safety and health information.

## Storage /Shelf Life

Keep away from moisture and sunlight. Temperature limit: 0-50°C. Keep the container closed when not in use. Shelf life from invoice date: Aerosol can 24 months.

## Sherwin K-017 Hi-Temp Penetrant

KO-17 hi-temp penetrant is a visible dye penetrant used to find flaws on surfaces at elevated temperatures, up to 176.7°C.

KO-17 saves time for weldmet inspection allowing the inspection to take place at pre-heated temperatures. Complies with low sulfur and low halogen requirements.

## Special Features

- KO-17 can be used to find surface flaws at elevated temperatures.
- KO-17 meets the ASME code qualification procedure compliance.
- KO-17 meets the requirements for low sulfur and halogen.
- KO-17 requires less dwell time.
- KO-17 is a water washable visible dye penetrant.

**Size:** 400ml.



## Sherwin K-019 Hi-Temp Remover

Removes excess KO-17 Hi-Temp Penetrant from part surfaces or for cleaning pre-application.

KO-19 is the remover step of a three-part system used to remove excess penetrant from part surface. KO-19 complies with low sulphur and low halogen requirements.

## Special Features

- Used to remove excess penetrant from surfaces at elevated temperatures
- Meets the ASME code qualification procedure compliance
- Meets the requirements for low sulfur and halogen
- Non-flammable remover.

**Size:** 400ml.



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