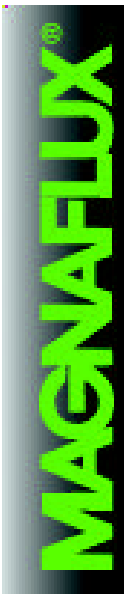


# PRODUCT DATA SHEET



## SKD-S2 Spotcheck, ZP-9F Zyglo — Nonaqueous Developers

Effective March 6, 1997

Supercedes November 21, 1994

### General Description

SKD-S2 and ZP-9F developers are ready to use suspensions of white developing particles in a fast drying solvent. They produce an opaque white coating which provides an excellent contrasting background for Spotcheck or Zyglo penetrant indications.

SKD-S2 and ZP-9F nonaqueous developers provide increased sensitivity through its solvent action on the penetrant at the defect site. These developers are compatible with and approved for use with all MAGNAFLUX® Spotcheck and Zyglo penetrants.

SKD-S2 and ZP-9F are specially formulated to be low in sulfur and halogens and contain no chlorinated hydrocarbons.

### Composition

SKD-S2 consists of a blend of inert inorganic particles, surface active agents, suspended in a solvent blend including isopropyl alcohol and acetone, while ZP-9F is a dispersion of organic particles in isopropyl alcohol and acetone.

### Safety

1. SKD-S2 and ZP-9F developers are intended for industrial use by qualified personnel only.
2. SKD-S2 and ZP-9F are highly flammable and should be stored in closed containers away from heat or open flames. Do **not** use around ignition sources such as flame, welding arcs or on red hot surfaces.
3. Avoid breathing solvent vapors by adequately ventilating work area. If used in confined areas that cannot be ventilated properly, operators should be equipped with separate breathing air supply.
4. Do not smoke or eat while using penetrant inspection materials. Avoid prolonged or repeated contact with skin by wearing protective hand wear. Wash hands thoroughly after use.
5. Read the Material Safety Data Sheets for safety information before using.

**Typical Properties** (Not a Specification)

	<b>SKD-S2</b>	<b>ZP-9F</b>
Flash Point	2° F (PMCC)	2° F (PMCC)
Density	7.3 lbs/gal(875g/L)	7.0 lbs/gal(834g/L)
Corrosion	Non-corrosive per MIL-I-25135E	Non-corrosive per MIL-I-25135E
Coating	White, opaque film	White, less dense film that is water washable
Sulfur Content	Less than 1000 ppm	Less than 1000 ppm
Chlorine Content	Less than 1000 ppm	Less than 1000 ppm

**Method of Application**

On standing, developer particles will settle out of suspension and must be re-suspended before applying. SKD-S2 and ZP-9F should be applied by spraying only, as dipping or brushing will cause excessive solvent action on the penetrant in discontinuities. SKD-S2 and ZP-9F developers may be applied by aerosol, or conventional spray gun.

Developers should be applied only after the test surface has been cleaned of excess penetrant, and the cleaning medium (solvent or water) has been dried off.

Non-aqueous developers should be sprayed in thin even layers which just wet the surface. Too wet a spray will cause excessive bleeding and running of indications; whereas too dry a spray will result in slow indication development as well as a possible loss in overall sensitivity due to limited solvent action.

The coating should be a relatively thin even white coating. SKD-S2's unique formula permits a thin coating to hide surface blemishes which could interfere with indication interpretation. A thick coating is not required for this effect and is undesirable as masking of indications could result. ZP-9F gives a less dense coating than SKD-S2, which is ideal for fluorescent inspection. However, a heavier coating will make it suitable for color contrast penetrants where a whiter background is required.

With Spotcheck penetrants, cracks will appear as red lines and porosity as spots. A general reddish color or pink developer film indicates incomplete removal of surface penetrant. With Zyglo penetrants, inspection is performed with a black light and cracks will fluoresce a yellow/green color. A general greenish fluorescent developer film indicates incomplete removal of surface penetrant.

**MIL-I-25135 Classification**

"E" Revision - Form d Developer

**Specification Compliance**

MIL-I-25135	ASTM E 1417
MIL-STD-271	ASTM E 165
MIL-STD-2132	NAVSEA 250-1500-1
AECL	Boeing BAC 5423
ASME B & PV Code, Sec. V	GE P50YP107 (SKD-S2)
McDonnell Douglas PS-21202	

**How Supplied:**

**SKD-S2**

12 oz. aerosol  
1 gallon can  
5 gallon pail  
55 gallon drum

**ZP-9F**

12 oz. aerosol  
5 gallon pail

**Coverage**

1 gallon approximately 800 square feet  
1 aerosol approximately 50 square feet