



Penetrant Professor Approved

Product Data Sheet  
**E-59A**  
Cleaner/Remover

1  
10/2015



Met-L-Chek Company manufactures a complete line of cleaner/removers used in the fluorescent (**Type 1**) and visible (**Type 2**) dye penetrant inspection process. All Met-L-Chek Company cleaner/removers are qualified to **AMS-2644** and are sold under the **Met-L-Chek®** and **Pen-Chek®** trademarks. Met-L-Chek Company products are manufactured under license in The Netherlands by NDT Europa.

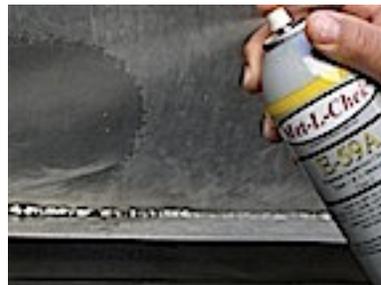
**E-59A** is a class 2 (non-halogenated), Method C inspection penetrant remover. It is designed for use in the solvent wipe technique for penetrant inspection in general metalworking, welding, nuclear and automotive applications. It is a moderate dry rate material and is ideal for penetrant wipe removal and pre-inspection surface cleaning. As a pre-cleaner it is sprayed directly on the test surface. As a penetrant remover it is sprayed onto wiping media and then the penetrant wiped from the surface. The remover should not be sprayed directly on to the test surface to remove the excess penetrant as the sensitivity will be impaired.

**E-59A** is listed on the Qualified Products List for **AMS-2644**. It meets the requirements of **AMS-2647**, **ASME Boiler and Pressure Vessel Code Section V**, **ASTM E-165**, **ASTM E-1417**, and **ISO- 3452** for penetrant inspection materials. It is low in Sulfur, Chlorine, Fluorine and other Halogens, making it safe for use on Titanium and high Nickel alloys found in aerospace, medical and nuclear components.

**E-59A** contains flammable solvents and should not be used in confined spaces or near open flames or sparks.

Guide to METHOD "C" wipe off processing per  
**ASTM E-1417**

1. Part must be clean, dry and at a temperature of 4.4°-52°C (40°- 125°F) before penetrant is applied.
2. Apply penetrant using spray, immersion, or wipe on.
3. Wait a minimum of 10 minutes; 20 minutes if temperature is 4.4°-10°C (40-50°F).
4. Moisten cloth with remover and wipe penetrant from surface. **Do not** spray remover on surface to remove penetrant, as sensitivity will be impaired.
5. Apply nonaqueous developer **D-70**, by spraying.
6. Wait a minimum of 10 minutes before inspection.
7. For fluorescent **Type 1** penetrants use UV-A illumination of >1000  $\mu\text{w}/\text{cm}^2$  @ 15 inches (38.1 cm) in a darkened area of <21 lux visible light (<2 footcandles). For visible **Type 2** penetrants use lighting of 1100 lux/m<sup>2</sup> (100 footcandles) minimum.



**E-59A used as a pre-cleaner spray directly on test surface and wipe clean.**



**E-59A used as a penetrant remover. Spray on wiping media, and wipe remove penetrant.**





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# E-59A Cleaner/Remover

## Typical Physical Properties

Form: clear liquid  
 Density: 743 g/L (6.2 lb/gal)  
 Flash Point: >12.7°C (>55°F)  
 Fluorescence: none  
 Corrosion of aluminum: none  
 Corrosion of carbon steel: none  
 Corrosion of magnesium: none  
 Corrosion of stainless steel: none  
 Corrosion of titanium: none  
 Residue: < 0.005 g/100 ml  
 Chloride content: < 50 ppm (< 0.005%)  
 Fluoride content: < 50 ppm (< 0.005%)  
 Sulfur content: < 50 ppm (< 0.005%)  
 Mercury: none  
 VOC's: 743 g/L  
 Ozone layer depleting substances: none  
 PCB's: none

## Specifications

AMS-2644E                      AMS-2647C  
 ASME B & PV code 07 sec V  
 ASTM E-165                      ASTM E-1417  
 ISO-3452-2005  
 NAVSEA-T9074-AS-GIB-010/271  
 RCC-M rev 2000

### NSN #'s

1 gallon can                      6850-00-357-7926

## Product Availability

12 x 16oz (400ml) vol. aerosol (net wt 300g or 10.5oz)  
 1 gallon (3.7L) metal can  
 5 gallon (18.9L) metal pail  
 55 gallon (208L) metal drum



The warranty shelf life of the product is 5 years from date of batch approval.

## GHS Information

### Danger



### GHS: Hazard Statements:

- H225:** Highly flammable liquid and vapor.
- H229:** Pressurized container: may burst if heated.
- H304:** May be fatal if swallowed and enters airways.
- H315:** Causes skin irritation.
- H319:** Causes serious eye irritation.
- H336:** May cause drowsiness or dizziness



### GHS Precautionary Statements:

- P102:** Keep out of reach of children.
- P210:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233:** Keep container tightly closed.
- P261:** Avoid breathing fumes/gas/mist/vapors/spray.
- P280:** Wear protective glove/clothing/eye protection/face protection.
- P284:** In case of inadequate ventilation wear respiratory protection
- \*P410:** Protect from sunlight.
- \*P412:** Do not expose to temperatures exceeding 50°C/122°F



### GHS Response Statements:

- IF INHALED:** Remove person to fresh air and keep comfortable for breathing, get medical advice/attention if you feel unwell.
- IF ON SKIN:** Wash with plenty of water. If skin irritation occurs, get medical advice/attention.
- IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easily to do. Continue rinsing, get medical attention.
- IF SWALLOWED:** Immediately call a poison center/doctor/physician. Do Not induce vomiting.
- IF ON CLOTHING:** Take off contaminated clothing and wash before reuse.

### Transport:

Bulk - UN 1268, Petroleum distillates, n.o.s. (naphtha) class 3, packing group II.  
 Aerosol: DOT- Limited Quantity.  
 Aerosol: IATA- UN 1950, Aerosol, flammable, class 2.1,

\* Specific to aerosol cans

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