

Cleaner for non destructive testing

Ref.: 10877

1. GENERAL DESCRIPTION

Quick drying solvent cleaner/degreaser and excess penetrant remover for the non-destructive testing of metal surfaces by liquid penetrant inspection.

Many cracks in engineering materials can be deep in spite of having a very small opening width on the surface and can cause very serious defects. By normal visual inspection such cracks may be very difficult to detect, but penetrant flaw detection is an extension of the visual inspection method. The control is carried out using 3 products: Crick 110 (cleaner), Crick 120 (penetrant) and Crick 130 (developer).

Crick 110 is a fast drying, powerful degreasing solvent blend free of 1,1,1-trichloroethane or other chlorinated solvents for the removal of dirt, grime and contaminants. Designed for the pre-treatment of the surface, prior to liquid penetrant inspection and to remove all visible, colored traces of the penetrant.

2. FEATURES

- Quickly dissolves grease, oil, lubricants, tar and adhesives.
- Effective wash-away of contaminants and colored penetrant.
- Fast evaporation to minimize downtime.
- · Leaves no residue.
- Stable, non-staining and non-corrosive.
- Safe on most plastics, coatings and rubbers (test prior to use).
- Aerosol is equipped with an 'accusol' for added convenience.
- Pressurized with non-flammable CO₂ propellant, giving an active product content of over 97%
- Approvals: ASME Section V, Art 6.

3. APPLICATIONS

Non-destructive inspection of materials, parts, assemblies, equipment, surfaces or structures:

- · Cracks, lack of fusion and open cavities in welded parts.
- Cracks and cavities caused by metal fatigue and cutting operations.
- Check of porosity or leaks in pipes, tanks, boilers, heat exchangers.
- Discontinuities, laps, folds and cracks in castings, forgings and ceramics.

A safety data sheet (MSDS) according to EC Regulation N° 1907/2006 Art.31 and amendments is available for all CRC products.







TECHNICAL DATA 2/3

CRC CRICK 110

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4. DIRECTIONS

Do not use at ambient temperatures below 10°C.

• In liquid penetrant inspections, the test object or material is coated with a visible dye solution. The excess dye is removed from the surface and a developer is then applied. The developer acts like a blotter and draws penetrant out of the imperfections of the surface. With visible dyes, the vivid color contrast between the penetrant and the developer makes the 'bleed-out' easy to see.

· Cleaning of the surface

The surface to be checked must be clean, degreased and dry. All soiling like rust, oil, grease, paint etc, which can mask the imperfections, must be removed. Finish the cleaning by spraying CRC Crick 110 generously. If possible wipe with an absorbent cloth and allow drying thoroughly.

· Penetrant application

Shake the can of CRC Crick 120 prior to use. Spray the penetrant in a light, even film on the surface, wetting all areas to be controlled. Allow to drain for 10 to 20 minutes.

Excess penetrant removal

Remove excess of penetrant by wiping the surface using a lint-free cloth. Apply water (CRC Crick 120 is water washable) until all visible, colored traces are removed. Care must be taken that only disturbing penetrant on the surface is removed. Dry properly.

Development

Shake the can of CRC Crick 130 thoroughly prior to use. Spray a light, homogeneous coat of developer from a distance of about 20 cm. Avoid any excess developer to avoid masking the finest flaws. Allow to develop for at least 7 minutes so that imperfections are visible.

Visual inspection of defects

As time passes, the defects will appear as red spots or lines on a white background. The speed of appearance, the shape and dimensions can give information about the nature of the defects. If necessary, post-clean the controlled surface and protect against corrosion with one of CRC's corrosion protection products.

A safety data sheet (MSDS) according EU-directive 93/112 is available for all CRC products.









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5. TYPICAL PRODUCT DATA (without propellant)

Appearance : colorless liquid, typical odor

Specific gravity (@ 20°C) : 0,716 Boiling range : 55 - 120°C

Vapor density (vs air = 1)

Freezing point

Evaporation rate (vs ether = 1)

Elash point (closed cup)

2 3

5 -30°C

2,8

Elash point (closed cup)

Flash point (closed cup) : < 0°C

Dynamic viscosity (@ 20°C) : 0,5 mPa.s

Surface tension (@ 20°C, est.) : 21 mN/m

Plastics compatibility : to be checked (*)

Non-volatiles : none

6. PACKAGING

aerosol: 12 x 500 ml

(*)Sensitive plastics (e.g. polystyrenes and polycarbonates, ...) need to be checked, particularly when thermal or mechanical stress is involved.

All statements in this publication are based on service experience and/or laboratory testing. Because of the wide variety of equipment and conditions and the unpredictable human factors involved, we recommend that our products be tested on-the-job prior to use. All information is given in good faith but without warranty neither expressed nor implied.

This Technical Data Sheet may already have been revised at this moment for reason such as legislation, availability of components and newly acquired experiences. The latest and only valid version of this Technical Data Sheet will be sent to you upon simple request or can be found on our website: www.crcind.com. We recommend you to register on this website for this product so you will be able to receive any future updated version automatically.

Version : 10877 03 0702 06 Date : 24 December 2008







Penetrant for non-destructive testing

Ref.: 10878

1. GENERAL DESCRIPTION

A red-colored liquid penetrant for the non-destructive testing of surfaces and structures. Many cracks in engineering materials can be deep in spite of having a very small opening width on the surface and can cause very serious defects. By normal visual inspection such cracks may be very difficult to detect, but penetrant flaw detection is an extension of the visual inspection method. The control is carried out using 3 products: CRC Crick 110 (cleaner), CRC Crick 120 (penetrant) and CRC Crick 130 (developer). CRC Crick 120 is a water washable liquid penetrant visible with natural white light. Based on special hydrocarbons, with high boiling point, surfactants, corrosion inhibitors and dyes.

2. FEATURES

- The check can be carried out with ready-to-use aerosols.
- It produces results in a speedy and easy way.
- An economical technology with no need for expensive and advanced equipment.
- A sensitive and reliable test method.
- Widely applicable, regardless the nature of the materials and shape of the objects.
- The aerosol uses a hydrocarbon propellant for controlled application.
- Certifications: ASME Section V, art 6.

3. APPLICATIONS

Non-destructive inspection of materials, parts, assemblies, equipment, surfaces or structures:

- Cracks, lack of fusion and open cavities in welded parts.
- Cracks and cavities caused by metal fatigue and cutting operations.
- Check of porosity or leaks in pipes, tanks, boilers, heat exchangers.
- Discontinuities, laps, folds and cracks in castings, forgings and ceramics.

4. DIRECTIONS

Do not use at ambient temperatures below 10°C.

- In liquid penetrant inspections, the test object or material is coated with a visible dye solution. The excess dye is removed from the surface and a developer is then applied. The developer acts like a blotter and draws penetrant out of the imperfections of the surface. With visible dyes, the vivid color contrast between the penetrant and the developer makes the 'bleed-out' easy to see.
- Cleaning of the surface

The surface to be checked must be clean, degreased and dry. All soil, like rust, oil, grease, paint etc, which can mask the imperfections, must be removed. Finish the cleaning by spraying CRC Crick 110 generously. If possible wipe with an absorbent cloth and allow drying thoroughly.



CRC





Penetrant for non-destructive testing

Ref.: 10878

Penetrant application

Shake the can of CRC Crick 120 prior to use. Spray the penetrant in a light, even film on the surface, wetting all areas to be controlled. Allow to drain for 10 to 20 minutes.

Excess penetrant removal

Remove excess of penetrant by wiping the surface using a lint-free cloth. Apply water (CRC Crick 120 is water washable) until all visible, coloured traces are removed. Care must be taken that only disturbing penetrant on the surface is removed. Dry properly.

Development

Shake the can of CRC Crick 130 thoroughly prior to use. Spray a light, homogeneous coat of developer from a distance of about 20 cm. Avoid any excess developer to avoid masking the finest flaws. Allow to develop for at least 7 minutes so that imperfections are visible.

Visual inspection of defects

As time passes, the defects will appear as red spots or lines on a white background. The speed of appearance, the shape and dimensions can give information about the nature of the defects. Post-clean the controlled surface and protect against corrosion with one of CRC's corrosion protection products.

A safety data sheet (MSDS) according to EC Regulation N° 1907/2006 Art.31 and amendments is available for all CRC products.

5. TYPICAL PRODUCT DATA (without propellant)

Solubility in water : water washable

6. PACKAGING

aerosol: 12 x 500 ml

All statements in this publication are based on service experience and/or laboratory testing. Because of the wide variety of equipment and conditions and the unpredictable human factors involved, we recommend that our products be tested on-the-job prior to use. When used on certain magnesium alloys, light discoloration might occur after extremely prolonged contact time with CRICK 120. All information is given in good faith but without warranty neither expressed nor implied.

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Version : 10878 03 0702 08 Date : 24 December 2008



Manufactured by :







Developer for non-destructive testing

Ref.: 10879

1. GENERAL DESCRIPTION

A quick drying developer, for the non-destructive testing of surfaces and structures. Many cracks in engineering materials can be deep in spite of having a very small opening width on the surface and can cause very serious defects. By normal visual inspection such cracks may be very difficult to detect, but penetrant flaw detection is an extension of the visual inspection method. The control is carried out using 3 products: Crick 110 (cleaner), Crick 120 (penetrant) and Crick 130 (developer). Crick 130 is a dispersion of a white powder in a fast evaporating solvent.

2. FEATURES

- The check can be carried out with ready-to-use aerosols.
- It produces results in a speedy and easy way.
- An economical technology with no need for expensive and advanced equipment.
- A sensitive and reliable test method.
- Widely applicable, regardless the nature of the materials and shape of the objects.
- The aerosol uses a hydrocarbon propellant for controlled application.
- Approvals : ASME Section V, Art 6.

3. APPLICATIONS

Non-destructive inspection of materials, parts, assemblies, equipment, surfaces or structures:

- Cracks, lack of fusion and open cavities in welded parts.
- Cracks and cavities caused by metal fatigue and cutting operations.
- Check of porosity or leaks in pipes, tanks, boilers, heat exchangers.
- Discontinuities, laps, folds and cracks in castings, forgings and ceramics.

4. DIRECTIONS

Do not use at ambient temperatures below 10'C.

- In liquid penetrant inspections, the test object or material is coated with a visible dye solution. The excess dye is removed from the surface and a developer is then applied. The developer acts like a blotter and draws penetrant out of the imperfections of the surface. With visible dyes, the vivid color contrast between the penetrant and the developer makes the 'bleed-out' easy to see.
- Cleaning of the surface
 The surface to be checked must be clean, degreased and dry. All soil, like rust, oil, grease, paint etc, which can mask the imperfections, must be removed. Finish the cleaning by spraying Crick 110 generously. If possible wipe with an absorbent cloth and allow drying thoroughly.









Developer for non-destructive testing

Ref.: 10879

Penetrant application

Shake the can of Crick 120 prior to use. Spray the penetrant in a light, even film on the surface, wetting all areas to be controlled. Allow to drain for 10 to 20 minutes.

• Excess penetrant removal

Remove excess of penetrant by wiping the surface using a lint-free cloth. Apply water (Crick 120 is water washable) until all visible, coloured traces are removed. Care must be taken that only disturbing penetrant on the surface is removed. Dry properly.

Development

Shake the can of Crick 130 thoroughly prior to use. Spray a light, homogeneous coat of developer from a distance of about 20 cm. Avoid any excess developer to avoid masking the finest flaws. Allow to develop for at least 7 minutes so that imperfections are visible.

Visual inspection of defects

As time passes, the defects will appear as red spots or lines on a white background. The speed of appearance, the shape and dimensions can give information about the nature of the defects. If necessary, post-clean the controlled surface and protect against corrosion with one of CRC's corrosion protection products.

A safety data sheet (MSDS) according EU-directive 93/112 is available for all CRC products.

5. TYPICAL PRODUCT DATA (without propellant)

Appearance : powder dispersed in a solvent blend

Color white Odor solvent Application temperature > 10°C Specific gravity (@ 20°C) 0.781 Boiling range (solvent) 40 - 65°C < 0°C Flash point liquid > 200°C Auto-ignition temperature Solubility in water not soluble

6. PACKAGING

aerosol: 12 x 500 ml

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