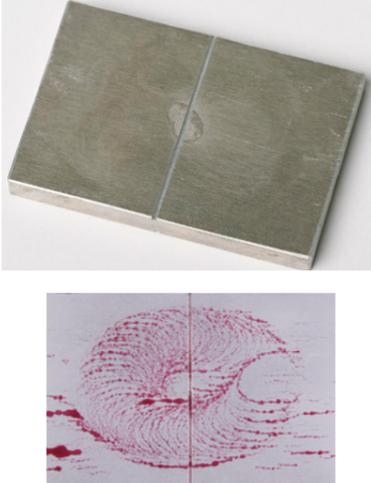


Test panel for liquid penetrant testing

Check for deterioration of penetrant, Check for sensitivity levels of different penetrant, Check for sensitivity level in visibility comparison, and performance evaluation.



| | | |
|--|---|---|
| <p>Eishin NiCr Type1 Test Panels ISO 3452-3, JIS Z2343-2</p>  <p>Options for these panels include 10, 20, 30, and 50 microns.</p> | <p>JIS Type 3:24SAluminum quench crack ing test panel ISO 3452-3, JIS Z2343-2</p>  | <p>ASME Alminum quench cracking test panel two pieces and 10mm thick</p>  |
|--|---|---|

Coating area

| | | |
|--------------|-------------------------|---|
| Coating area | Aerosol (450ml) | Penetrant Approx. 12m ² Developer Approx. 4.2m ² |
| | Brush coating (per /1L) | Penetrant Approx. 35m ² |

※The coating area will be increased or decreased depending on the surface roughness. It varies greatly depending on the individual skill of the inspector.

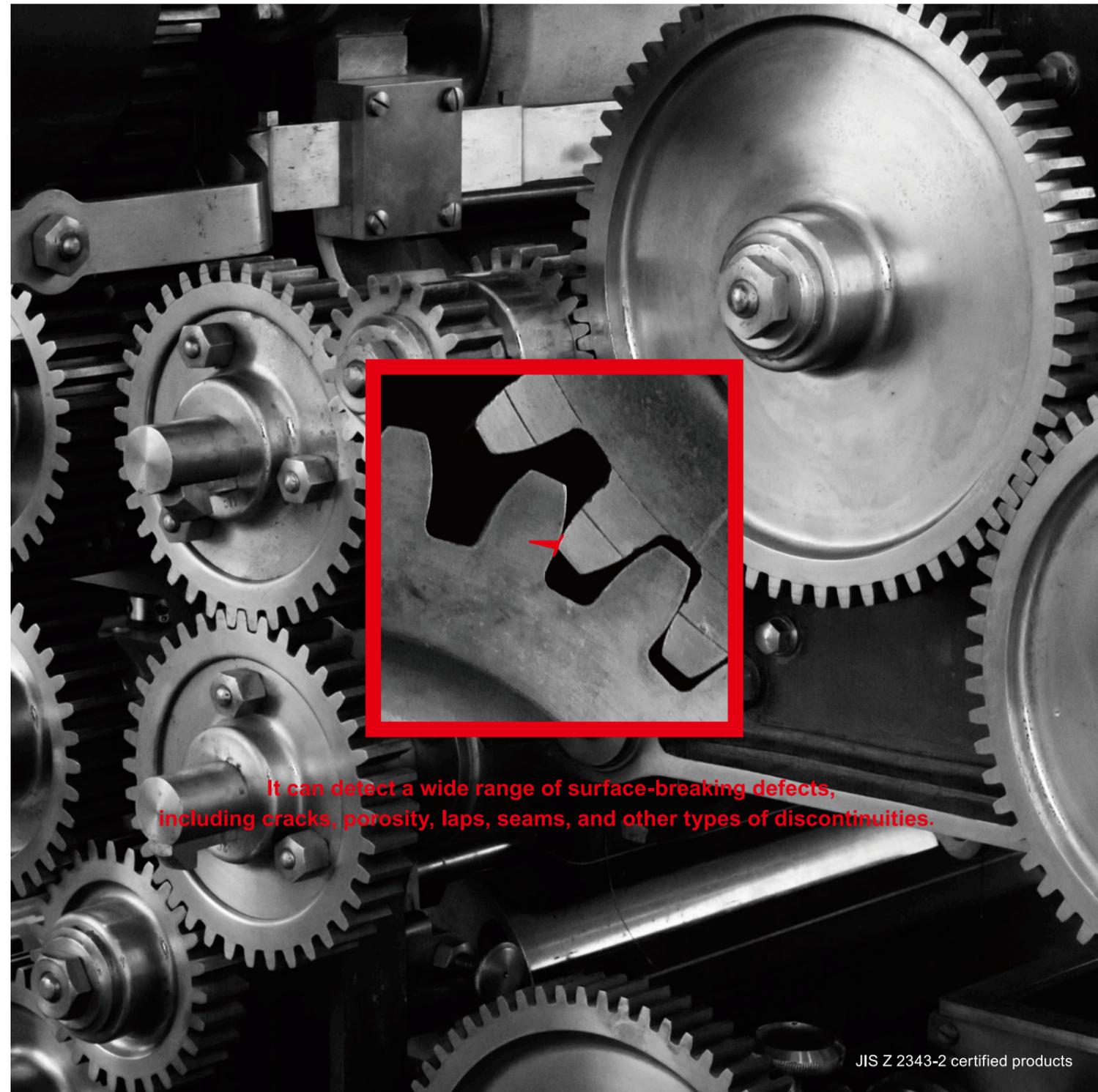
Size and packaging

| | | |
|---------------|------------------|--|
| Size | Penetrant | Aerosol450ml, Liquid 3.8L square can, 18L square can |
| | Remover | Aerosol450ml, Liquid3.8L square can , 18L square can |
| | Developer | Aerosol450ml, Liquid3.8L square can, 18L square can |
| Shipping unit | Aerosol products | A set of six cans: penetrant×1, developer×2, remover×3 in cardboard box 6pack, 12pack,18pack, 24pack,30pack,36pack,48pack each in cardboard box |
| | Liquid products | 3.8L squre can: 2 or 4cans in cardboard box 18L squre can:one cans in cardbiard box |

Visible Dye Penetrant Testing

RED-MARK

detect surface-breaking defects that are not visible to the naked eye.



It can detect a wide range of surface-breaking defects, including cracks, porosity, laps, seams, and other types of discontinuities.

EISHIN KAGAKU CO.,LTD

| | | |
|---------------------|--|---|
| Head office | 1-2-13,Higashishinbashi,Minato-ku,Tokyo,105-0021 | TEL.+81-3-3573-4235 FAX.+81-3-3573-4230 |
| Ibaragi Factory | 4689-1,Uchimoriya-cho,Zyousou-shi,Ibaragi,303-0043 | TEL.+81-297-27-9507 FAX.+81-297-27-9508 |
| R&D | 6-283,Wakashiba,Kashiwa-shi,Chiba,277-0871 | TEL.+81-4-7131-0911 FAX.+81-4-7131-0912 |
| Higashinihon Branch | 6-283,Wakashiba,Kashiwa-shi,Chiba,277-0871 | TEL.+81-4-7131-5674 FAX.+81-4-7131-5799 |
| Kawasaki Branch | 13-5,Ise-cho,Kawasaki-ku,Kawasaki-shi,Kanagawa,210-0805 | TEL.+81-44-233-4351 FAX.+81-44-233-5295 |
| Nagoya Branch | 3-28-14,Chikusa,Chikusa-ku,nagoya-shi,Aichi,464-0858 | TEL.+81-52-741-8851 FAX.+81-52-741-8867 |
| Oosaka Branch | 2-3-30,Gamou,Zyoutou-ku,Oosaka-shi,Oosaka,536-0016 | TEL.+81-6-6931-9058 FAX.+81-6-6931-1705 |
| Hiroshima Branch | 1-4,Minamitakeya-cho,Naka-ku,Hiroshima-shi,Hirosima,730-0049 | TEL.+81-82-243-1532 FAX.+81-82-243-1598 |

<https://www.eishinkagaku.co.jp/>

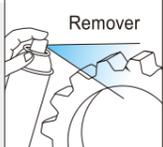


DPT is a relatively low-cost and easy to use method that can be performed quickly and on-site, making it a cost-effective and efficient method of testing.

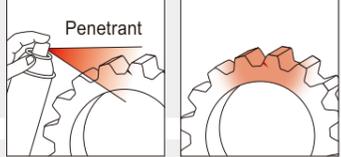


■ how to use

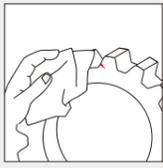
- 1 Cleaning**



Use a cleaner/remover to remove dirt (fats and oils, etc) from the inspection surface and clean the surface. Allow cleaner to remain on part long enough to dissolve dirt or film. Wipe dry with a clean cloth. Repeat if necessary. After final clean wiping, allow time to dry before using penetrant.
- 2 Apply Penetrant**



Spray or brush on the penetrant and allow to stand for 5 to 60 minutes.
- 3 Remove Penetrant**

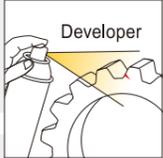


Wipe off excess penetrant with a dry wess cloth, then wipe off the remaining penetrant with a wess cloth perfused in the remover. DO NOT flush surface with cleaner/remover

A. solvent removal

B. water washing

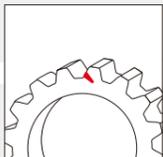
Remove excess penetrant with a water spray and completely dry surface moisture with a wess cloth or dry air or hot air drying. DO NOT flush surface with cleaner/remover
- 4 Develop**



The developer should be shaken well before use. Spray a thin, even layer of developer on the inspection surface. Developing time is 10 to 30 minutes.
- 5 Inspect**



Defects will be marked by a deep red indication. After the appropriate development time has elapsed, visually inspect under natural or white light.
- 6 Post Cleaning**



Remove developer on the inspection surface with water, brush, solvent, etc.



Click here to view a video of dye penetrat test procedure and principle



<https://www.youtube.com/watch?v=GpazBTv2x-s>

Solvent Removal Combinations of products for various uses and cleaning methods

| Type | Item | Product Name | Product features | STANDARDS | | Flash Point |
|---------------------------|-----------|------------------|---|-----------|------|-------------|
| | | | | JIS | ASME | |
| STANDARD | Penetrant | R-1A(NT) | Most popular products can be used for various materials of iron and non-iron material. | ○ | | >+70°C |
| | Developer | R-1S(NT) | | ○ | | -10°C |
| | Remover | R-1M(NT) | | ○ | | -4°C |
| AMS | Penetrant | R-1A(NT)/1 | AMS2644 Qualified products | ○ | ○ | >+94°C |
| | Developer | R-1S(NT)/1 | AMS2644 Qualified products | ○ | ○ | -10°C |
| | Remover | R-1M(NT)/1 | High flash point and quick-drying type | ○ | ○ | >+40°C |
| Low HALOGEN Low SULFUR | Penetrant | R-1A(NT) Special | This is the standard type suitable for flaw detection of stainless steel, titanium alloys and nickel alloys | ○ | ○ | >+70°C |
| | Developer | R-1S(NT) Special | | ○ | ○ | -10°C |
| | Remover | R-1M(NT) Special | | ○ | ○ | -4°C |
| NON-FLAMMABLE | Penetrant | RF-1A | Non-flammable solvent-removing with Low-GWP | ○ | | |
| | Developer | RF-1S | | ○ | | - |
| | Remover | RF-1M | | ○ | | - |
| HIGH TEMPERATURE | Penetrant | R-1AH(NT) | Inspection target items can be used in a range from 90°C to 200°C | ○ | | >+70°C |
| | Developer | R-1SH(NT) | | ○ | | >+70°C |
| | Remover | R-1MH(NT) | | ○ | | >+90°C |

Water-washable penetrant

| Type | Item | Product Name | Product Features | STANDARDS | | Flash Point |
|---------------------------|-----------|-----------------------|--|-----------|------|-------------|
| | | | | JIS | ASME | |
| REGULAR | Penetrant | R-3B(NT)PLUS | large parts, rough surface, Complex shaped parts stainless steel, titanium alloys, | ○ | | >+70°C |
| LOW HALOGEN LOW SULFUR | Penetrant | R-3B(NT) Special PLUS | titanium alloys and nickel alloys | ○ | ○ | >+70°C |
| WATER BASE | Penetrant | R-3B(NT) W-1 PLUS | Water-based penetrant is ideal flaw detection of all test items | | | |

DEVELOPER REMOVER for Special Applications

| Type | item | Product Name | Product Features | STANDARDS | | Flash Point |
|--------------------------------------|-----------|----------------------|--|-----------|------|-------------|
| | | | | JIS | ASME | |
| EASILY REMOVABLE | Developer | R-1SB | Easy removal of developer coating after inspection with a brush or air | ○ | | -10°C |
| FAST DRYING | Developer | R-1SD(NT) | Ultra-quick-drying type with a low flash point Effective at high humidity and low temperatures | ○ | | -10°C |
| LOW HALOGEN LOW SULFUR | Developer | R-1SD(NT) Special | Flaw detection of same as above, stainless steel, titanium alloys, titanium alloys and nickel alloys | ○ | ○ | -10°C |
| WET SUSPENDABLE | Developer | R-3W | Non-flammable wet, developer. | | | - |
| PASTE | Developer | DP-1S | High-viscosity type suitable for inspection of slab materials | | | - |
| SLOW DRYING | Remover | R-1MS(NT) | Slow Volatilization and Drying | ○ | | >+40°C |
| LOW HALOGEN LOW SULFUR | Remover | R-1MS(NT) Special | High flash point and safer than the normal low halogen and low sulfur type | ○ | ○ | >+40°C |
| | Remover | R-1MG(NT) Special | High flash point and safer than the normal | ○ | ○ | +23°C |
| | Remover | R-3M(NT) Special | Water aerosol used in removal processes, ideal for stainless steel, titanium alloys, and nickel alloys | | | |
| Removal of condensation and freezing | Remover | R-1ML(NT) Special | Quick-drying type suitable for low temperature and high humidity | ○ | ○ | -4°C |
| WATER AEROSOL | Remover | R-3M(NT) | Pure aerosol for use in removal processes | | | |