

NEOPAINT NPT16

Version 25012021

White Contrast Paint

Neopaint NPT16 is a quick drying white contrast aid paint that has been specifically formulated for use in magnetic particle inspection. Neopaint NPT16 aerosols produce an ultra fine spray, producing a uniform and solid white background using formulations high in Titanium Dioxide to give the best possible background contrast. Neopaint NPT16 is suitable for use with both aqueous and Hydrocarbon based inks and can be used in conjunction with either black or red magnetic particles.



Key Features

Appearance	Opaque white liquid
Carrier Fluid	Dichloromethane
Drying Time	< 2 Minutes
Compatibility	For use with black and red inks

1 Benefits

1.1 Maximize indication detection

- Find indications of all shapes and sizes.
- Ultra fine aerosol spray tip for uniform coverage.
- Produces a bright white opaque surface which makes indications stand out.
- Reduces surface glare and reflections from metallic surfaces with matte finish.

1.2 Fast drying

- Dries evenly and quickly in less than 2 minutes.
- Neopaint NPT16 creates an optimal surface for faster indication formation.
- Speed up inspections by applying a clean coat on the first pass without bubbles or flakes.

1.3 Maximum defect contrast

- Recommended for use with Neocol B ink for highest levels of indication contrast.
- Part of the NEOCOL product family of high quality magnetic particle testing consumables products from Johnson & Allen Ltd.

1.4 Convenient to use

- Easy to carry and use in the field with the convenient aerosol cans.
- Use in all conditions without the need for darkness or UV lights.

1.5 Wide application versatility

- Meets or exceeds all requirements of ISO 9934 and ASTM E1444 - Ideal for professional industrial applications.

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2 Method of use

2.1 Introduction

The information presented in this section is intended as a manufacturer's guide and best practice recommendations for a typical inspection process. It is strongly recommended any NDT procedure be first approved for use by an organisations qualified level 3 NDT operator or by someone in a senior position (e.g. quality manager) prior to any work being undertaken. Neopaint NPT16 White Contrast Paint is available in both 400mL aerosols and in 5L and 25L bulk containers.

2.2 Pre-Cleaning

Ensure inspection surface is free of grease, oil and dirt prior to ink application. This can be done in many ways including with NeoIndus 1ES, NeoIndus 2EB or NeoIndus 3WEB degreaser and paint removers. Allow part to completely dry before applying any white contrast paints. The component temperature should be between 5 and 50°C.

2.3 Contrast Paint Application

If applying Neopaint NPT16 by aerosol shake the aerosol well before use. Apply Neopaint NPT16 evenly to each surface being inspected in thin uniform coatings at a distance of 20 to 30cm with adequate ventilation. Allow Neopaint NPT16 up to 2 minutes to dry before moving onto the next stage of the inspection. If more than one layer is required to achieve a solid white background, then allow the first coating to completely dry first before applying a second. Ensure Neopaint NPT16 coating is completely dry before applying any magnetics inks or magnetic fields. When application is finished invert the aerosol and spray for a few seconds to flush the ultra fine spray tip.

2.4 Ink Application

If using Neocol B from aerosols shake well for a minimum of 1 minute before use and spray at a distance of 20 to 30cm. If using Neocol B bulk from a tank then ensure the ink is continuously agitated and check the solid content daily using a centrifuge flask as part of a daily performance check. Neocol B can be applied either during magnetization (continuous method) or after magnetization (residual method). If applied during magnetization ink application should be ceased before the magnetization is ended.

2.5 Inspection

Inspection should take place in diffused white light of at least 500 lux at the component surface. This should be confirmed by undertaking a daily performance check using a light meter. Any defects present and capable of being detected should become visible almost immediately after application of Neocol B is ceased. Indications will appear as black build-up contrasted against the white background caused by the black magnetic particles being attracted to flux leakage caused by a defect being present.

2.6 Paint Removal

After the final inspection the component surface can be cleaned using either NeoIndus 1ES, NeoIndus 2EB or NeoIndus 3WEB paint removers. A steel wire brush can also aid in the removal of white contrast paint from welds if permissible. This can be particularly beneficial with hard to wipe geometry like welds.

2.7 Effects on material

Neopaint NPT16 is unlikely to cause corrosion in common constructional metals (e.g. most steels).

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2.8 Storage

Store in a cool place, protect from freezing conditions. The shelf life for aerosols and bulk are 18 months and 36 months from date of manufacture respectively. The date of manufacture will be displayed on the container along with the batch serial number.

2.9 Safety and Environment

Before undertaking the process described it is important that this complete document, together with any relevant Safety Data Sheets (SDS), be read and understood. All local and national regulations on the transport, storage, use and waste treatment of chemicals in concentrated or diluted form and as working solutions must be obeyed.

3 Product Data

General Information	
Appearance	Opaque white liquid
Family Classification	NEOCOL
White Light	> 500 lux - Required at component surface
Flash Point	> 100°C
Carrier Fluid	Dichloromethane
Propellant (Aerosol)	Carbon Dioxide
Compatibility	For use with black and red inks
Application Type	Wet
Testing Methods	Continuous and Residual
Drying Time	< 2 minutes
Temperature Range	5 to 50°C
Shelf Life (Aerosol)	18 months
Shelf Life (Bulk)	36 months
Halogen Classification	Designation 'Low'
Sulphur Classification	Designation 'Low'
Heavy Metal Classification	Designation 'Low'
Standard Compliance	
Penetrant Standards	ISO 9934 ASTM E1444 ASTM E709
Additional Standards	Contact Johnson & Allen Ltd for confirmation of compliance for additional standards not listed above

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