MAGNAFLUX

Product Data Sheet

690.1

Oil-based Fluorescent Magnetic Ink

TIEDE® 690.1 is an oil-based, ready-to-use fluorescent ink for wet method magnetic particle testing. It gives clear bright yellow/green indications when viewed in a darkened area under UV(A) of peak wavelength 365nm.

Used in conjunction with suitable magnetising equipment, 690.1 will locate medium-fine surface and slightly sub-surface defects.

FEATURES

- Ready-to-use
- Clear, bright indications under UV light
- Low maintenance, oil-based suspension
- High sensitivity
- Excellent fluorescent contrast for quick identification and better inspection quality
- Excellent particle mobility
- Good dispersion stability
- Protects parts and equipment against corrosion
- Great concentration consistency
- Superior surface wetting
- Even surface coverage for better detection

SPECIFICATION COMPLIANCE

- AMS2641
- AMS3044
- AMS3045
- AMS3046 (Aerosols only)
- ASME BPVC-V
- ASTM E709
- ASTM E1444/E1444M
- EN ISO 9934-2

APPLICATIONS

Defect location: surface and slightly subsurface

Ideal for:

- Detecting very fine to fine discontinuities
- Critical applications
- After secondary processing
- In-service inspections
- High strength alloys

Ideal for:

- Inclusions
- Seams
- Shrink cracks
- Tears
- Laps
- Flakes
- Welding defects
- Grinding cracks
- Quenching cracks
- Fatigue cracks

COMPOSITION

A suspension of magnetic particles in a high-flash, low-odour petroleum distillate.

690.1

PRODUCT PROPERTIES

Form and colour	Brown liquid
Flash point	-40°C (for propellent)
SAE sensitivity	8 - 9
Magnetic particles	MG 601
Particle size range	3 - 5 µm
Sulphur content	< 200 ppm
Halogens content	< 200 ppm

Like all Magnaflux materials, 690.1 is closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

USER RECOMMENDATIONS

NDT Method	Magnetic Particle Testing, Fluorescent, Wet Method
Storage temperature	10°C to 30°C
Usage temperature*	-5°C to 50°C
Settlement volume	0.1 - 0.25 ml (1 hour)
Recommended concentration range	0.4 - 0.9 g/litre
Suspension Vehicle	Carrier II
Magnetic Particles	14A, MG 410
Cleaner	SKC-S
UV lamps	EV6000, EV6500, ST700
Accessories	Centrifuge Tube, MTU No.3 Test Block (EN ISO 9934-2)

* For use of an inspection vehicle conforming to AMS2641, minimum temperature is 6 °C.

INSTRUCTIONS FOR USE

Clean the component before testing to reduce the risk of contamination and provide a suitable test surface.

Shake the aerosol can to mix the ink thoroughly.

Spray all surfaces of the part while applying a magnetising current. Remember to stop spraying the ink before the current is switched off, otherwise the force of the ink could wash away any indications.

Shake the can regularly during during testing.

After inspection, demagnetise your component before cleaning to ensure easy removal of any particle residue.

PACKAGING AND PART NUMBERS

008A185 (x 10)

HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the Safety Data Sheets, which are available at **www.magnaflux.eu**