

SMARTCHECK MPI BLACK

General Description

SMARTCHECK MPI BLACK is an oil based ready to use black magnetic ink for use in the Magnetic Particle Inspection process. It consists of a dispersion of fine particles of black iron oxide in a highly refined non-volatile hydrocarbon.

SMARTCHECK MPI BLACK uses high quality spherical particles of uniform size for improved mobility in response to magnetic fields. The carrier is de-aromatised, virtually odourless, has a high flash point and incorporates dispersants and wetting agents.

SMARTCHECK MPI BLACK is used to detect fine surface and near surface discontinuities in ferrous materials such as low alloy steels.

Method of Use

Surface temperature should be between -20°C and 75°C.

The component to be inspected should be first cleaned to remove paint, grease, rust, scale or other contaminants.

SMARTCHECK MPI WHITE should then be applied to the surface of the component to improve contrast and the visibility of any indications.

The component should then be magnetised using appropriate means and SMARTCHECK MPI BLACK is mixed thoroughly and applied to the test area by spraying or flowing. Ensure that magnetisation is continued for a few seconds after application of SMARTCHECK MPI BLACK.

The component should be inspected under good lighting and indications will appear as black lines around flux leakage fields.

SMARTCHECK MPI WHITE and SMARTCHECK MPI BLACK can be readily removed using SMARTCHECK MPI CLEANER. Demagnetising the component prior to cleaning will assist in the removal.

Typical Properties (Not a specification)

Appearance:	Black particles suspended in a clear mobile liquid
Density (g/mL):	approx. 0.8 g/mL
Flash Point:	Greater Than 100°C
Solids Content:	approx. 2.0%
Particle Size:	approx. 0.2 µm

Specifications

SMARTCHECK MPI BLACK conforms to;

AMS 3041 (Bulk)	AMS 3043 (Aerosol)	ISO 9934-2
ASTM E-3024	AS 1171	

Note: ASTM E-1444 is for Aerospace and is for fluorescent inspection.

Effects on Materials

SMARTCHECK MPI BLACK should not have any adverse effects on steel or most other metals. The product may cause swelling of some plastics and rubbers after prolonged contact. Users are advised to check the compatibility.

Storage

SMARTCHECK MPI BLACK should be stored under good warehousing conditions out of direct sunlight and away from heat sources. The aerosols must be stored below 50°C.

Safety

SMARTCHECK MPI BLACK in the aerosol form is flammable by flame extension, even though, it is manufactured from a combustible liquid and non flammable gas. SMARTCHECK MPI BLACK is combustible and is not classified a dangerous good in bulk form. Use away from sources of ignition or intense heat.

Refer to the SDS before using this product.

Packaging & Product Codes

MPIBA - 300g Aerosols
MPIB5 -5 L Drums

Disclaimer

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