TECHNICAL DATA SHEET

DUBL-CHEK BLACK OXIDE No. 1

Black Oxide Particles Premixed with Wetting Agent

DESCRIPTION

DUBL-CHEK Black Oxide No. 1 is black magnetic oxide particle that can be suspended in a highly refined light petroleum oil or water. The particles respond to magnetic leakage fields created by discontinuities in ferromagnetic material. Particles rapidly collect at leakage fields producing black indications.

FEATURES & BENEFITS

- Particles are easily agitated, fast acting and produce defined indications
- Particles meet specification requirements
- Can be used with both stationary and portable magnetic test equipment
- Can be used at elevated temperatures
- Water based suspension is non-flammable

PHYSICAL PROPERTIES

Particle Colour:	Black
Specific Gravity:	0.4 g/ml
Particle Size:	0.5 – 4.0 µm (average 1.5µm)
Temperature limit:	0°C to 50°C

SPECIFICATION COMPLIANCE

- ASTM E3024
- MIL-STD-271
- NAVSEA 250-1500-1
- NTR-1E
- MIL-STD-1949
- AMS 3042
- AMS 2641

ORDERING INFORMATION

Product Code	Packaging
1546/30LBS	13.6 litres 3.5 gallons)

BATCH NUMBERS

Batch numbers can be found on the bottom of aerosol cans or labels of bulk containers. Certificate of Conformance documents are provided with the product or can be download from www.callington.com

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DIRECTIONS

Note: These instructions describe the basic process, but they may need to be amended by the user to comply with applicable specifications and/or inspection criteria provided by the contracting agency.

Water Suspension: The water must be conditioned before adding the **Black Oxide No.1** in order to disperse the particles wet the test surface and inhibit corrosion. **W5-C** is the recommended conditioner and is added at 10g/Lt. **Black Oxide No.1** should be added at a concentration of 15g/Lt.

Settlement Test: The settlement test, using a pear-shaped centrifuge tube, is essential to check the particle concentration and contamination to the suspension. This ***SHALL*** be performed on the initial batch, an adjustment made to the concentration, or at each shift change. The Settlement Test methods and particle concentrations can be found in relevant standards. The recommended volume is between 1.2 and 2.5 ml and will vary from one specification to another. The concentration may be adjusted by adding more **MPF**, water or **Black Oxide No.1** as required.

1. Clean the test surface and allow it to dry.
2. Apply **DUBL-CHEK CP-2** for background contrast, if required.
3. Magnetise the area to be inspected.
4. Ensure continuous agitation of the suspension.
5. Apply the suspension to the test part at a distance of approximately 150mm from surface.
6. Allow the excess oil/water to run off the inspection area.
7. Inspect the surface under visible light.
8. Collections of **Black Oxide No.1** particles will reveal discontinuities at the leakage fields.
9. Clean and repeat the process; changing the orientation of the magnetising direction

STORAGE/SHELF LIFE

Keep away from moisture and sunlight. Keep the container closed when not in use. Recommended Storage: 10ºC - 32ºC. Shelf life: 36 months (3 years) from date of manufacture. Refer to NDT Shelf Life and Storage Recommendations for further information.

HEALTH & SAFETY

When Black Oxide No.1 is suspended in oil it forms a combustible liquid. Use with adequate ventilation and away from spark, fire or open flames. Avoid prolonged or repeated contact with skin. Do not breathe gas, fumes, vapour or spray. Consult the MSDS for more Safety and Health information.

Get medical attention if irritation develops and persists. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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