

ZChem Specialities Pvt. Ltd.

Global Pioneer in NDT Consumables & Equipment



Inspection Certificate (In accordance with EN 10204 Type-3.1)

Product: ZChek 9E Black

Non-Fluorescent MPI Suspension

Batch No.: 230532 Mfg. Date: 05/23

We certify that the above product, when tested at the time of manufacturing meets the following requirements

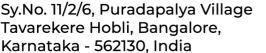
- ASME Boiler and Pressure Vessel Code 2010,2013,2017, 2019, 2021 Edition Section V, Nondestructive Examination including, Article 7, including 2005, 2006, 2008, 2009b and 2011a Addenda, paragraph T-731, paragraph T-765 and Article -25 as applicable.
- ASTM E709-21 paragraph 2.2
- AMS 3041F, AMS 3043E, AMS 2641D

Parameter	Test Method	Quality requirement	Batch Result
Contamination	AMS 3041F-3.3.1	No foreign material, scum, or agglomeration	Confirms
Concentration	AMS 3041F-3.3.2	1.0-2.4 ml per 100ml	1.9 ml per 100ml
Sensitivity	AMS 3041F-3.3.3	6 Hole indication shown	6 Hole indication
Color	AMS 3041F-3.3.4	Black	Black
Particle size	AMS 3041F-3.5	< 2 % residue on 45μ mesh	1.6 % residue on 45µ mesh
Mechanical durability	AMS 3041F -3.6	Retain initial sensitivity and color	Confirms
Spray ability and leakage	AMS 3043E-3.4	No perceptible leakage. Uniform spray pattern and No chunking and clogging of the nozzle	Confirms
Viscosity	AMS 2641D-3.2.2	< 3cSt @ 38 deg. C	2.66cSt @ 38deg.C
Flash point	AMS 2641D- 3.2.1.1 Type-1	> 93deg.C	103deg.C

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Odor	AMS 2641D- 3.2.6	No offensive, No	Confirms
		objectionable odor	
Color	AMS 2641D-3.2.7	Not darker than No.1 ASTM	Confirms
		color	

- ASTM E3024-22
- ASTM E709-21, Paragraphs 8.1.2,8.2,8.3,8.5 &8.5.4
- EN ISO 9934-2-2015

Parameter	EN ISO 9934-2	Quality requirement	Batch Result
Performance	7.1	Indication on Reference block-1 Reference block-2	Pass Length-6cm
Color	7.2	Black liquid	Color identical
Particle size	7.3	d> 1.5μm -d< 40 μm	dl(10%)=0.635μm da(50%)= 1.766μm du(90%)=4.26μm
Flash point	7.7	Report as found	103 deg.C
Viscosity	7.9	Less than 5.0mPa @ 20deg.c	4.0 mPa @ 20 deg.C
Mechanical stability test Short term test	7.10	No degradation in sensitivity	Pass
Foaming	7.11	No significant foaming	Pass
Storage stability	7.13		3 years
Content of sulphur	7.15	< 200 ppm	32ppm
Content of halogens (chlorine & fluorine)	7.15	< 200 ppm	64ppm

Notes

- $1. \quad Bulk\ material\ has\ a\ minimum\ shelf\ life\ of\ 5\ years\ and\ Aerosol\ has\ minimum\ shelf\ life\ of\ 3\ years.$
- 2. EN ISO 9934-2 (7.15) specification require test results stated in ppm, but some require in percentage. To convert ppm to percentage, divide the ppm value by 10,000.

Signature
Manager Operations



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