

ZChem Specialities Pvt. Ltd.

Global Pioneer in NDT Consumables & Equipment



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

Product: ZChek DL-Developer

Non Aqueous Developer For Visible Liquid Penetrant Inspection

Batch No.: 230667 Mfg. Date: 06/23

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 2005, 2006, 2008, 2009b and 2011a Addenda Article-6 paragraph T-640 and Article 24 as applicable.
- ASTM E165/E165M-18, Paragraph 7.1
- ASTM E1417-21

Parameter	ASME Boiler & PV Code	Quality requirement	Batch Result
Sulfur	Sec.V	< 0.1%	0.0025wt % of residue
Chlorine + Fluorine	Sec. V	< 0.1%	0.0036 wt % of residue

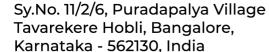
- IS 3658-2013
- NUCLEAR POWER CORPORATION OF INDIA for materials for Dye Penetrant Inspection process.

Parameter	NPCL	Quality requirement	Batch Result
Sensitivity	5.2.1 (i)	Equal to standard	Pass
Sulfur content	5.2.1(ii)	Max 25ppm	Pass (ref note-2)
Halogen content	5.2.1 (ii)	Max 25ppm	Pass (ref note-2)
Corrosive Properties	5.2.1 (iii)	No indication of pitting	
SS			SS- No indication of pitting
CS			CS- No indication of pitting
Copper			Copper- No indication of pitting
Brass			Brass- No indication of pitting
Aluminum			Aluminum- No indication of
			pitting

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• EN ISO 3452-2-2021

Parameter	EN ISO 3452-2	Quality Requirement	Batch result
Appearance	6.1	Equal to standard	Pass
Sensitivity Test	6.2	Equal to standard	Pass
Corrosive properties	6.11	No evidence of staining, pitting or any other corrosion on Magnesium Alloy	
Sulfur Content	6.12	< 200ppm	25ppm
Halogen Content	6.12	< 200ppm	36ppm
Solid Content	6.13	13.5-16.5gm	14.17gm
Developer Performance	6.15	Equal to standard Pass	
Re-dispersibility	6.16	Readily dispersed Pass	
Density of carrier fluid	6.17	0.76-0.84 g/cc @29.5deg.C	

• Internal quality Check

Parameter	Internal Check	Quality Requirement	Batch Result
Spray pattern	QC/TP/003	Equal to standard	Pass
Settling rate	QC/TP/030	<2ml	2.0ml

Notes

- 1. Bulk material has a minimum shelf life of 5 years and Aerosol has minimum shelf life of 3 years.
- 2. The NPCL Sulfur and halogen content is evaluated on basis of turbidity against the standard solution.
- 3. Most specifications require test results stated in percent, but some require parts per million (ppm). To convert percent to ppm, move the decimal four places to the right
- 4. ASME Sec V, procedure states that to evaporate off volatile solvents before analysis for Sulfur and Halogens. According to these specifications, only those residues higher than 0.005 g/100ml shall be analyzed for Sulfur and Halogens. Lower residues shall be reported.

Signature

Manager Operations



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