



MR[®] – PENETRANT TESTING

PRODUCTS FOR SUPERIOR INDICATIONS



PRODUCT OVERVIEW – FLUORESCENT & COLOURED SYSTEMS

www.mr-chemie.in

MR[®]
CHEMIE
NDT-materials



	TYPE	SENSITIVITY CLASS			APPROVALS				FAMILY TESTING				TEMPERATURE RANGE		GHS LABELLING		BASIS			DELIVERY FORM																		
		I = Fluorescent	II = Coloured	III = Coloured + Fluorescent	0.5	1	2	3	ASME Code V, Art. 6 T-641	EN ISO 3452-2	EN ISO 3452-5	EN ISO 3452-6	PMUC (EDF)	TLV 9017 01	NPCIL	Aa Water + MR [®] 81T-R	Ad Water + MR [®] 70	Cd MR [®] 85, MR [®] 79 + MR [®] 70	Ce MR [®] 85, MR [®] 79 + MR [®] 70I	Ce MR [®] 85, MR [®] 79 + MR [®] 70	Ae Water + MR [®] 70I	Ee Water, MR [®] 85 + MR [®] 70	Ce MR [®] 91H + MR [®] 70H	- 30° C to 0° C	-10° C to +55° C	+5° C to +55° C	+55° C to +200° C	Aerosol	Bulk	Oil	Solvent-free	Solvent	Glycol	Aerosol	Bulk	Biological Degradability		
PENETRANT - FLUORESCENT	MR [®] 670 F Penetrant Fluorescent	●		●				●	●															●	●	●						●	●	●	●			
	MR [®] 691 F Penetrant Fluorescent	●			●			●	●																●	●	●						●	●	●	●		
	MR [®] 672 F Penetrant Fluorescent	●				●		●	●																●	●	●						●	●	●	●		
	MR [®] 682 F Penetrant Fluorescent	●				●		●	●																●	●	●						●	●	●	●		
	MR [®] 683 F Penetrant Fluorescent	●					●		●	●															●	●	●						●	●	●	●		
PENETRANT - COLOURED	MR [®] 62 Penetrant Red		●					●	●									●							●								●	●				
	MR [®] 62 P Penetrant Red			●				●	●									●							●								●	●				
	MR [®] 67 Penetrant Red			●				●	●											●													●	●				
	MR [®] 68 H Penetrant Red + Fluorescent			●				●	●	●															●								●	●				
	MR [®] 68 NF Penetrant Red + Fluorescent			●				●	●	●	●														●								●	●				
	MR [®] 311 - R Penetrant Red		●					●	●											●					●								●	●				
DEVELOPER	MR [®] 312 Penetrant Red		●					●	●									●						●								●	●					
	MR [®] 313 Penetrant Red		●					●	●											●					●								●	●				
	MR [®] 70 Developer White							●	●		●	●	●	●												●								●	●			
	MR [®] 70 I Developer White							●	●												●					●								●	●			
	MR [®] 70 H Developer White							●	●	●															●								●	●				
MR [®] 81 T-R Dry Developer Powder							●	●																●								●	●					
CLEANER	MR [®] 79 Special Cleaner							●	●		●	●	●												●								●	●				
	MR [®] 85 Remover Acetone Free							●	●		●	●	●												●								●	●				
	MR [®] 87 Remover Acetone Free							●	●																●								●	●				
	MR [®] 91 H Remover							●	●	●															●								●	●				

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The product range for special applications available with MR[®] Chemie is beyond the scope of this brochure. Kindly write to us for more information at info@mrchemie.in



PENETRANT TESTING

acc. to EN ISO 3452



1. Pre-Cleaning

Red/White with daylight

Fluorescent with UV light

MR[®] Cleaner

Mechanic or chemical preparation and pre-cleaning:
Clean the test area (remove tinder, rust, other contaminations like oil, fat, etc.)
Cracks must be open to the surface.



4. Developing



2. Penetrant

MR[®] Penetrant red
Water washable and / or solvent removable penetrant penetration time between 5 and 60 minutes
Application: spraying, brushing, flooding, dipping.

MR[®] Penetrant fluorescent
Water washable penetrant penetration time between 5 and 60 minutes
Application: spraying, brushing, flooding, dipping.



5. Inspection



3. Excess penetrant removal

Remove with water and/or
Remove with solvents (e.g. MR[®] 79, 85, 88): Generally, the excess penetrant shall be removed first by using a clean lint-free cloth. Subsequent cleaning with a clean lint-free cloth lightly moistened with solvent shall then be carried out.

Control of excess penetrant removal regarding penetrant residues

Daylight ≥ 350 lx	UV light > 1 W/m ² and < 100 lx
Drying	
MR [®] Wet developer solvent based or wet developer water based	MR [®] Dry developer powder or MR [®] Wet developer solvent based or MR [®] Wet developer water based
Drying when using wet developers	
Monitoring the developing process (duration 10 to 30 minutes)	
Daylight Daylight or synthetic light illumination on surface min. 500 lx	UV light illumination on surface min. 10 to 50 W/cm ² darkened room with max. 20 lx
Recording, if necessary: post-cleaning and protection	
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FOR PENETRANT TESTING ACCORDING TO

- EN ISO 3452-2
- ASME Code V, Art.6 T-641

In pic.: **MR67 PS**, a foam based Eco-Line Penetrant for Special Applications of Aerospace, Defence, Nuclear & Automotive Research.