



भारतीय प्रौद्योगिकी संस्थान खड़गपुर  
खड़गपुर-७२१ ३०२, भारत  
Indian Institute of Technology Kharagpur  
Kharagpur - 721 302, India

TRANSPORTATION ENGINEERING SECTION  
CIVIL ENGINEERING DEPARTMENT

15.06.2017  
Kharagpur

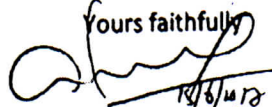
### Test Results on Rapid Setting Bituminous Emulsion-2 (Type RS-2)

Name of the client : Mr. Sujan Sarkar( Production and Quality Manager)  
A.R. Engineers, I.O.C. Gate No-1 Haldia, East Medinipur, W.B.  
Ref :Your letter No: Nil dated 11.05.2017  
Sample supplied (as per letter) : Bituminous Emulsion: Rs-2 Type  
Date of receiving of sample : 11.05.2017

S No	Name of the Test	Test Result for RS-2 emulsion	IS 8887:2004- Specification
			RS-2
1	Residue on 600 $\mu$ IS sieve, % by mass	0.02	0.05(max)
2	Saybolt Furol Viscosity at 50 <sup>o</sup> C, sec	109	100-300
3	Coagulation of emulsion at low temperature	Nil	Nil
4	Storage stability after 24 hrs, %	0.6	1.0(max)
5	Particle charge	Positive	Positive
6	Miscibility with water	No Coagulation	No Coagulation
7	Tests on Residue		
	(i) Residue by evaporation, %	68.9	67(min)
	(ii) Penetration 25 <sup>o</sup> C/100g/5, sec	115	80-150
	(iii) Ductility 27 <sup>o</sup> C/cm	82	50(min)
	(iv) Solubility in trichloroethylene, %	98	98(min)

Note: Bituminous emulsion sample (RS-2 type) was supplied by M/s A. R Engineers, Haldia and not collected by IIT Kharagpur. The test report is valid for the sample supplied by the client.



Yours faithfully  
  
(Dr. M. Amaranatha Reddy)  
In-charge, Transportation Engg Lab



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### Test Results on Rapid Setting Bituminous Emulsion-1 (Type RS-1)

Name of the client : Mr. Sujan Sarkar( Production and Quality Manager)  
A.R. Engineers, I.O.C. Gate No-1 Haldia, East Medinipur, W.B.  
Ref :Your letter No: Nil dated 11.05.2017  
Sample supplied (as per letter) : Bituminous Emulsion: Rs-1 Type  
Date of receiving of sample : 11.05.2017

S No	Name of the Test	Test Result for RS-1emulsion	IS 8887:2004- Specification
			RS-1
1	Residue on 600 $\mu$ IS sieve, % by mass	0.018	0.05 (max)
2	Saybolt Furol Viscosity at 50 <sup>o</sup> C, sec	41	20-100
3	Coagulation of emulsion at low temperature	Nil	Nil
4	Storage stability after 24 hrs, %	0.8	2.0 (max)
5	Particle charge	Positive	Positive
6	Miscibility with water	No Coagulation	No Coagulation
7	Tests on Residue		
	(i) Residue by evaporation, %	67.4	60(min)
	(ii) Penetration 25 <sup>o</sup> C/100g/5, sec	112	80-150
	(iii) Ductility 27 <sup>o</sup> C/cm,	79	50(min)
	(iv) Solubility in trichloroethylene, %, min	99	98(min)

Note: Bituminous emulsion sample (RS-1 type) was supplied by M/s A. R Engineers, Haldia and not collected by IIT Kharagpur. The test report is valid for the sample supplied by the client.



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### Test Results on Medium Setting Bituminous Emulsion (Type MS)

Name of the client : Mr. Sujan Sarkar( Production and Quality Manager)  
A.R. Engineers, I.O.C. Gate No-1 Haldia, East Medinipur, W.B.  
Ref :Your letter No: Nil dated 11.05.2017  
Sample supplied (as per letter) : Bituminous Emulsion: MS Type  
Date of receiving of sample : 11.05.2017

S No	Name of the Test	Test Result for MS Emulsion	Specification as per IS:8887-2004 for MS Emulsion
1	Residue on 600 $\mu$ IS sieve, % by mass	0.01	0.05 (max)
2	Saybolt Furol Viscosity at 50 <sup>o</sup> C, sec	98	50-300
3	Coagulation of emulsion at low temperature	Nil	Nil
4	Storage stability after 24 hrs, %	0.60	1.0(max)
5	Particle charge	Positive	Positive
6	Coating ability and water resistance		
	(i) Coating, dry aggregate	Good	Good
	(ii) Coating, after spraying	Fair	Fair
	(iii) Coating, wet aggregate	Good	Fair
	(iv) Coating, after spraying	Fair	Fair
7	Miscibility with water	No Coagulation	No Coagulation
8	Tests on Residue		
	(i) Residue by evaporation, %	69	65 (min)
	(ii) Penetration @25 <sup>o</sup> C/100g/5 sec	137	60-150
	(iii) Ductility @27 <sup>o</sup> C, cm	77	50(min)
	(iv) Solubility in trichloroethylene, % by mass	98	98(min)

Note: Bituminous emulsion sample (MS type) was supplied by M/s A. R Engineers, Haldia and sample was not collected by IIT Kharagpur. The test report is valid for the sample supplied by the client.



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