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APS Sample data sheet

(Inliner Testing Institutes Workgroup)

for materials testing of CIPP liners

neutral independent non-profit institute

❒ ***Initial test*** ❒ ***Repeat test*** ***to Test Report No.:***

Details of sampling

Supervised by (Name)	Sampling		Sampling confirmed (company/site management performing)	
	Date	Time	Block capitals	Signature
Project Manager (Name)			**Purchase Order No.**	

Specimen identification

Client material-testing			Material ID			
Client			Line designation			
Construction project			Specimen designation			
Company performing			Date of installation			
Manufacturer (CIPP)			Condition of old pipe	❍ I	❍ II	❍ III
Material	Resin	Carrying mat.	Sampling point	Pipe ❍	End manhole ❍	Interm. manhole ❍
Pipe geometry	❍ Round ❍ Egg		Sampling position	Crown ❍	Side zone ❍	Base ❍

Required short-term properties as per client's information

Bending modulus of elasticity E_f [MPa]		Circumf. mod. of elast. E_U [MPa]	
Bending stress at initial fracture σ_{fB} [MPa]		Initial ring stiffness S_0 [N/m²]	
Statically load-bearing wall thickness h [mm]		Max. creep tendency K_{n24} [%]	
Reduction factor for continuous loads A_1		Density ρ [g/cm³]	

Test results (please tick tests to be performed!)

Note: 1 MPa = 1 N/mm²

Bending mod. of elast., bending stress as per DIN EN ISO 178/ ❍ DIN EN 13566, Part 4 ❍ DIN EN ISO 11296, Part 4

❒

Date of test	E_f [MPa]	σ_{fB} [MPa]	h [mm]	
		Test direction	❍ axial	❍ radial

24h creep tendency with ref. to DIN EN ISO 899, Part 2

❒

K_{n24} [%]

Initial mod. of elast., initial ring stiffness as per DIN EN 1228

❒

Date of test	E_U [MPa]	S_0 [N/m²]	h [mm]

24h creep tendency with ref. to DIN EN 761

❒

K_{n24} [%]

Water tightness as per APS code

❒

Date of test	Test period [min]	Test pressure [bar]	Test result	
	30	0.5 ± 5%	❍ tight	❍ not tight

Calcining method as per DIN EN ISO 1172

❒

Date of test	Resin content [%]	Residue, total [%]	Glass content [%]	Additive [%]

Spectral analysis with ref. to ASTM D5576 (FT-IR)

❒

Date of test	Resin

Density as per DIN EN ISO 1183, Part 1

❒

Date of test	Density ρ [g/cm³]

Thermal analysis as per DIN EN ISO 11357, Part 1/DIN 53765 (DSC measurement)

❒

Date of test	Glass-transition temperature T_G [°C]				Enthalpy [J/g]	
	$T_{G\,H1}$		ΔT_G		❍ exothermic	❍ endothermic
	$T_{G\,H2}$					

Residual styrene content as per DIN 53394, Part 2 (GC)

❒

Date of test	Qnty. weighed in [mg]	Res. styrene content [mg/kg]	Res. styrene content [%]	Qnty. weighed in referred to	
				Total weighed in	Pure resin
				❍	❍

Evaluation of results

Requirements	met	not met
Bending modulus of elasticity	❍	❍
Bending stress	❍	❍
Wall thickness	❍	❍
Water tightness	❍	❍

Requirements	met	not met
Circumfer. mod. of elasticity	❍	❍
Initial ring stiffness	❍	❍
24h creep tendency	❍	❍
Density	❍	❍

Remarks	

Signature of Inspector/Head of Lab.

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