LINER SAMPLE DELIVERY NOTE FOR MATERIAL TESTING

☐ *INITIAL TEST* ☐ *REPEATED TEST* *for Test Report No.* ____

1. Sampling data:

Sample taken by:		Test institute:	
Date / time:		Address:	

2. Sample identification:

Project:			Material ID:			
Project owner / client:			Sample description:			
Cost centre:			Sewer line description:			
Installer firm:			Nominal diameter:			
Liner manufacturer:			Date installed:			
Carrier material:			Host pipe condition:	O I	O II	O III
Resin material:			Sampling location:	O MH-MH line	O final MH	O interm. MH
Pipe geometry:	O circular	O egg shape	Sampling position:	O crown	O springline	O invert

3. Required initial properties according to structural design calculations:

Flexural E-modulus$_{DIN}$ E_f [N/mm²]:		Circumferential E-modulus E_U [N/mm²]:	
Bending stress$_{at\ first\ break}$ σ_{fB} [N/mm²]:		Initial ring stiffness S_0 [N/m²]:	
Wall thickness **d** [mm]:		Maximum creep K_{N24} [%]:	
Reduction factor A_1 :		Density δ [g/cm³]:	

4. Test results:

Flexural modulus, bending stress acc. to DIN EN ISO 178

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Date tested	E_f [N/mm²]	σ_{fB} [N/mm²]	h [mm]
	Load type	O axial	O radial

24 h creep after DIN EN ISO 899-2

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Date tested	K_N [%]

Circumf. E-modulus, initial ring stiffness acc. to DIN EN 1228

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Date tested	E_U [N/mm²]	S_0 [N/m²]	h [mm]

24 h creep after DIN EN 761

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Date tested	K_N [%]

Water tightness acco. to DIN EN 1610

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Date tested	Load period	Test pressure [bar]	Test result	
	30 minutes		O passed (tight)	O failed (leaking)

Calcination method acc. to DIN EN ISO 1172

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Date tested	Resin [%]	Total residues [%]	Glass content [%]	Additive [%]

Spectral analysis after ASTM D 5576 (FT-IR)

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Date tested	EP resin	UP resin	VE resin	Other resin

Density acc. to DIN EN ISO 1181-1 or -2

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Date tested	δ [g/cm³]

Thermal analysis acc. to DIN EN ISO 11357-1 / DSC analysis DIN 53765 Method A

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Date tested	Glass transition temperature [°C]			Enthalpy [J/g]	
	T_{G1}		ΔT_G		
	T_{G2}			O exothermic	O endothermic

Residual styrene content acc. to DIN 53394-2 (GC)

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Date tested	Weighed-in quantity [mg]	Residual styrene [mg/kg]	Residual styrene [%]	Weight-in quantity referred to	
				O Total quantity	O Pure resin

5. Evaluation of results:

Requirement	met	not met
Flexural-E-modulus E_f	O	O
Bending stress σ_{fB}	O	O
Wall thickness **d**	O	O
Water tightness	O	O

Requirement	met	not met
Circumfer. E-modulus E_U	O	O
Initial ring stiffness S_0	O	O
24 h creep K_N	O	O
Density δ	O	O

6. Remarks:

7. Signature of tester / lab: