

Sulzer India Ltd
 Sulzer House
 Baner Road, Aundh
 Pune India 411 007
 Telephone +91 020 3021 6300
 Telefax +91 020 3021 6306

Questionnaire Sulzer Polymer Mixer

Your Company's address

Direct Dial-No.: [redacted]
 Telefax-No.: [redacted]
 e-mail: [redacted]

Your technical contact at Sulzer

Waeckerlin Manfred
 PPT/Wk
 Direct Dial-No.: +41 (52) 262 6746
 Telefax-No.: +41 (52) 262 0069
 e-mail: manfred.waeckerlin@sulzer.com

Your reference: [redacted]

Date: [redacted]

PROCESS INFORMATION					
Most viscous polymer					
Name		[redacted]			
Flow rate 1	max. flow =	[redacted] kg/h	at operating temperature	[redacted] °C	and Viscosity [redacted] * Pas
Density		[redacted] kg/m ³			
Lowest viscous polymer					
Name		[redacted]			
Flow rate 2	min. flow =	[redacted] kg/h	at operating temperature	[redacted] °C	and Viscosity [redacted] * Pas
Flow rate 3	max. flow =	[redacted] kg/h	at operating temperature	[redacted] °C	and Viscosity [redacted] * Pas
Density		[redacted] kg/m ³			
* please enclose all three (3) viscosity curves of above polymer grades in the range of shear rates between 1 to 100 s-1 at the corresponding operating temperatures					
Additive A					
Name		[redacted]		<input type="checkbox"/> soluble <input type="checkbox"/> insoluble <input type="checkbox"/> partly soluble <input type="checkbox"/> gas <input type="checkbox"/> liquid <input type="checkbox"/> solid	
Inlet temperature		[redacted] °C	Viscosity	[redacted] Pas	
Flow rate at	polymer flow 1	[redacted] kg/h	polymer flow 2	[redacted] kg/h	polymer flow 3 [redacted] kg/h
Additive B					
Name		[redacted]		<input type="checkbox"/> soluble <input type="checkbox"/> insoluble <input type="checkbox"/> partly soluble <input type="checkbox"/> gas <input type="checkbox"/> liquid <input type="checkbox"/> solid	
Inlet temperature		[redacted] °C	Viscosity	[redacted] Pas	
Flow rate at	polymer flow 1	[redacted] kg/h	polymer flow 2	[redacted] kg/h	polymer flow 3 [redacted] kg/h

GENERAL PROCESS INFORMATION		
max. allowed pressure, absolute, at mixer inlet	$p_{\text{inlet, max}} =$	bar
max. allowed pressure drop of the static mixer	$\Delta p_{\text{max}} =$	bar
Flow pattern	<input type="checkbox"/> uniform <input type="checkbox"/> pulsating with a pulsation factor = <input type="text"/> type of pump for the polymer = <input type="text"/> type of pump for the additive = <input type="text"/>	

DESIGN INFORMATION		
Planned installation	<input type="checkbox"/> horizontal <input type="checkbox"/> vertical flow up <input type="checkbox"/> vertical flow down	
Planned inside pipe diameter	<input type="text"/> mm	
Max. installation length	<input type="text"/> mm	
Mixer connection	<input type="checkbox"/> Flanges according to DIN <input type="text"/> NB <input type="text"/> mm PN <input type="text"/> bar <input type="checkbox"/> Flanges according to ANSI B16.5 NB <input type="text"/> " NPS <input type="text"/> # specify flange face for gasket: <input type="text"/> <input type="checkbox"/> Weld ends pipe outside dimension <input type="text"/> mm x wall <input type="text"/> mm <input type="checkbox"/> others: (please specify) <input type="text"/>	
Design conditions of mixer	<input type="text"/> bar	<input type="text"/> °C Material of Construction <input type="checkbox"/> SS <input type="checkbox"/> CS others: (please specify) ...
Double jacket required	<input type="checkbox"/> yes <input type="checkbox"/> no	
Design conditions of jacket	<input type="text"/> bar	<input type="text"/> °C Material of Construction <input type="checkbox"/> SS <input type="checkbox"/> CS others: (please specify) ...
Design according to	<input type="checkbox"/> DIN <input type="checkbox"/> ASME <input type="checkbox"/> others: (please specify) ...	

IMPORTANT DESIGN CRITERIAS

➤ What is the exact purpose for which our mixer shall be installed?

- distribution of soluble additive blending/compounding of two polymers
 admixing of masterbatch in polymer homogenizing color after a dynamic mixer
 dispersing of insoluble additives production of masterbatch
 solving of partly soluble additives homogenizing of temperature after a dynamic mixer
 for plug flow behavior and a narrow residence time distribution
 others (please specify) []

➤ Do you have experience with this mixing task?

- yes, (specify the mixer which was used) []
 no

➤ Is it a new production line revamp

➤ What homogeneity is required?

- excellent good rough completely solved

If known: standard deviation in relation to mean value $\sigma/\bar{x} =$ []

Required droplet size: _____ μm interfacial tension = [] N/m

How do you describe the homogeneity required with your own words?

[]

➤ What kind of equipment is installed after the mixer?

- filter screen changer dye head _____m empty pipe
 others (please specify) []

➤ What is produced with this line?

- pellets if yes, do you use underwater pelletizer strand pelletizer other []
 sheets
 others (please specify) []

➤ Which types and which amounts of additive (others than specified above) are already mixed in the polymer before the polymer enters our mixer?

[]

➤ What is the project schedule?

- early phase (Budget quotation is sufficient)
 firm quotation is required expected date of installation of the mixer:: []

Please provide a flow sheet or/and a plant layout or a sketch of the planned mixer installation

