

Best Practice Notice

Sodium Hypochlorite (NaOCl)

Doc no: BPN-001 Dated: August 27, 2019 (updated 2/11/20)

Sodium hypochlorite (bleach), is a difficult application for any piping system due to the decomposition byproducts. Our Chem Proline®, Chem Prolok®, and Poly-Flo® Advanced PE Piping Systems are installed in many sodium hypochlorite systems with success if the “BEST PRACTICES” are followed.

Sodium Hypochlorite – “BEST PRACTICES” for use with Advanced PE	
Temperature Liquid	80° F or lower
Pressure Liquid	≤ 80 psi
Concentration/pH	≤ 25 % , pH>11
Threaded connections	NOT recommended
Butt Fusion Fittings	Recommended
Socket Fusion Fittings	Should be avoided – there is a stress point at the pipe insertion depth which has the potential for stress cracking
Stagnant pipelines	Stagnant chemical in piping should be avoided. Install recirculation loops or plan to blow/wash out line not in use.
Tank fill lines	Bulk delivery tank fill pipelines should be flushed after use to remove residual NaOCl.
Ambient Temperature	Indoor installation with a controlled environment is recommended. Outdoor installations, shade from sun. Painting pipe white does provide some reflection to reduce temperature. Insulate in environments with extreme solar radiation.
Stress points on pipe minimized	Expansion loops: installed to allow pipe to expand/contract with temperature changes. Clamps: Plastic or metal with elastomeric barrier Restraints: installed to minimize pipe stress by thermal growth. Pipe Clips should be circumferential and not overtightened-piping should be free to move in pipe clip.



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Asahi/America can also provide our Ultra Proline Halar (ECTFE) piping for challenging Sodium Hypochlorite applications. Please reference literature online or contact Engineering at Asahi/America.

	Better	Best
System	Chem Proline® Advanced PE 	Ultra Proline® ECTFE 
Expected Life	>10 years	>50 years
Project Estimate	\$10,000	\$95,000

	Better	Best
Valves	Ball Valve 	Diaphragm Valve 
Notes	Vented ball	
Availability	Advanced PE: 4" and below ECTFE: 1" and below	Advanced PE: 2" and below ECTFE: 2" and below

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