

Product Data Sheet

PHOEPOX® 4401

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November 2017



Phoepox® 4401

is a dual-purpose fusion bonded epoxy powder coating that is designed for friction reduction on the internal surface of pipelines as well as internal corrosion protection of line pipes and fittings carrying sweet gas and sweet crude oil. Phoepox® 4401 can be either applied together with a phenolic primer or as a stand-alone coating.

			Typical Value	Test Method / Device
POWDER PROPERTIES	GEL TIME	at 200°C	100-200 seconds	ISO 8130-6
	THERMAL PROPERTY	Tg1	60 ± 5°C	ISO 21809-2
		Tg2	102 ± 5°C	
		ΔH	30-70 J/g	
	DENSITY		1.55 ± 0.1 g/cm ³	Gas Pycnometer
	PARTICLE SIZE		99.8% < 160 μm	Laser Scattering
	MOISTURE CONTENT		≤ 0.5%	CSA Z245.20-06
COLOR		Grey or Red		
PHYSICAL TESTS	CATHODIC DISBONDING *	1-3 mm at -3.5 VDC, 65°C, 24 hours 3-5 mm at -1.5 VDC, 20°C, 28 days		CSA Z245.20-06
	HOT WATER SOAK*	Rating 1 at 75°C, 24 hours		CSA Z245.20-06
	FLEXIBILITY	Pass, at 3°, -18°C		CSA Z245.20-06
	SALT SPRAY TEST	No blistering at 50°C, 5 months		ASTM B117
	IMPACT	≥ 5J		CSA Z245.20-06
	ABRASION (TABER)	≤ 50 mg		ASTM D4060, at CS 17 wheel 1000 cycles



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STORAGE STABILITY 12 months from production date in $\leq 23^{\circ}\text{C}$ and $\leq 65\%$ relative humidity. Cooler temperatures and lower humidity are recommended.

* The performance will be affected by surface preparation and curing condition.

APPLICATION DATA

SUBSTRATE	Mild steel
SURFACE PREPARATION	Surface must be free from contamination and blasted as defined by swedish Sa 2½
SURFACE ROUGHNESS	45-100 μm
RECOMMENDED FILM THICKNESS	100-250 μm
APPLICATION TEMPERATURE	150-230 $^{\circ}\text{C}$
POST CURE CONDITIONS	$\Delta T_g \leq 2$