LG XPROgeo 401E

Description:

Engineered with DuPont™ Elvaloy® technology, LG XPROgeo provides long lasting durability in any type of weather, and is designed to perform within harsh environments that require exposure to chemicals and oil. In addition, the high performance reinforced woven substrate provides the superior physical properties that meet the extreme needs of engineers. LG XPROgeo 401E is suitable for use in a wide variety of applications such as floating covers, wastewater systems, secondary containment and some primary containment. 401E's 40mil thickness is an excellent alternative when a heavier membrane fabric is required for additional safety.

Advantages:

- Superior Chemical Resistance
- Superior Physical Properties
- Superior Resistance to UV and Weathering
- Superior Resistance to Low Temperature
- High Dimensional Stability
- Excellent Seam Strength
- Excellent Heat & R/F Weldability
- Excellent Flexibility
- Available Width: 74"

Applications:

- Excellent chemical resistance for containment applications
- Outstanding durability
- Superior UV stability
- Excellent flexibility

	XPROgeo 301E	XPROgeo 301PE	XPROgeo 401E	XPROgeo 306E	XPROgeo 241E	XPROgeo 281CE
Aquaculture / Fish hatchery	O	O	O	O		
Hazardous Waste	O	O	O	O		
Impoundments	O	O	O	O		
Secondary containment	O	O	O	O	O	
Spill containment	O	O	O	O	O	O
Leachate collection	O	O	O	O		
Wastewater process facilities	O	O	O	O		
Floating covers	O	O	O	O	O	O
Floating Baffles/ Curtains				O	O	O
Oil Boom					O	
Landfill liners	O	O	O	O		
Bermliners	O		O	O		O
Primary Fuel Containment		O				

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Physical Properties:

Physical Properties	Test Method	401E	
		UK / US	Metric
Base Fabric Type	ASTM D 751	Polyester	
Base Fabric Weight	ASTM D 751	6.5 oz/yd^2	220 g/㎡
Thickness	ASTM D 751	40 mil Min.	1.00 mm Min.
Width	ASTM D 751	74"	188cm
Weight	ASTM D 751	38 ± 2 oz/yd^2	1,280 ± 70 g/㎡
Tear Strength	ASTM D 4533 (Trap Tear)	44 / 55 lbs Min.	200 / 250 N Min.
Breaking Yield Strength	ASTM D 751 (Grab, P-A)	550 / 550 lbs Min.	2,450 / 2,450 N Min.
Low Temperature Resistance	ASTM D 2136 (4hr-1/8', Mandrel)	Pass @ -30˚F	Pass @ -35℃
Dimensional Stability	ASTM D 1204 (212˚F/100℃) - 1hr	1.5% Max Each Direction	
Blocking Resistance	ASTM D 751 (180 ˚F / 82℃)	#2 Rating Max	
Dead Load –Seam Shear Strength	ASTM D 751 (4-Hrs)	Seam Length 2in, 1in Strip 70 ˚F @ 210 lbs 160 ˚F @ 105 lbs	Seam Length 5cm, 2.5cm Strip 21 ℃ @ 935 N 70 ℃ @ 477 N
Adhesion Heat Sealed Seam	ASTM D 751 Dielectric Weld	33 lbs / 2 in	150 N / 5cm
Abrasion Resistance	ASTM D 3389 (H-18 Wheel 1kg)	2000 Cycles (min.) Before fabric exposure 30mg/100 cycles Max Coating Loss	
Weathering Resistance	ASTM G 153 (Carbon-Arc)	10,000 hrs – no appreciable changes or stiffening or cracking of coating	
Wicking	ASTM D 751	1/8 in Max	0.3 cm Max
Water Absorption	ASTM D 471 (7days)	0.025 kg/m2 max @70 oF / 21℃ 0.14 kg/m2 max @ 212 oF / 100℃	
Hydrostatic Resistance	ASTM D 751, Method A	800 psi Min.	5.5 Mpa Min.
Seam Shear Strength	ASTM D 751 Grap P-A	550 lbs Min.	2,450 N Min.
Bursting Strength	ASTM D 751 Ball Tip	650 lbs Min. (800 lbs Typical)	2,940 N Min. (3,630 N Typical)
Puncture Resistance	ASTM D 4833	250 lbs Min	1,110 N Min

The data provided on this sheet represents typical physical properties and is intended to serve only as a guide. No liability will be accepted as a consequence of the publication of this data sheet. All information on this data sheet is based upon laboratory tests.

Material Safety Data Sheet:

Section I	
Manufacturer's Name LG Chem, Ltd.	Emergency telephone No 001-82-2-3773-3382
Address (Number, Street, City, State, ZIP Code) 20, Yeouido-dong, Yeongdeungpo-gu, Seoul 150-721, Korea	
Product name and synonyms: XPRO GEO 301E, 301SE, 401E, 306E, 241E, 281CE	
Product group: Polyester or nylon fabric	Formula: PVC / EVA Coated

Section Ⅱ. Ingredient			
Compounds	TLV (Units)	Compounds	TLV (Units)
Polyester fabric	N/A	Stabilizers	N/A
PVC	N/A	Lubricants	N/A
EIA	N/A	Processing agents	N/A
Pigments	N/A		
UV Absorbers	N/A		

Section Ⅲ. Physical data			
Boiling point(˚F)	N/A	Specific gravity (H_2 O=1)	1.2~1.3
Vapor pressure(mmHg)	N/A	Percent volatile by volume	N/A
Vapor density(Air=1)	N/A	Evaporation rate	N/A
Solubility in water	Insoluble	Physical state	Solid state
Appearance and odor: Black and Vinegar			

Section Ⅳ. Fire and explosion hazard data	
Flash point	Over 250˚F (Flammable limit: N/A)
Fire fighting	Use foam, dry chemical, water spray or fog Avoid breathing smoke Use pressure self-contained breathing apparatus

Section Ⅴ. Stability and reactivity data			
Stability	Unstable	N/A	Condition to avoid:
	Stable	N/A	
Incompatibility (Materials to avoid)			Non reactive
Hazardous decomposition products			CO, CO2, HCL, Trace aromatic
Hazardous Polymerization	May occur	N/A	Conditions to avoid
	Will not occur	N/A	

Section Ⅵ. Health hazard data		
Inhalation		Normal condition: Non-irritant Melting or heating condition: Respiratory irritation is possible due to vapor
Skin contact		Normal condition: Non-irritant Melting or heating condition: Respiratory irritation is possible due to vapor
Eye contact		Normal condition: Non-irritant Melting or heating condition: Respiratory irritation is possible due to vapor
Ingestion		Not normally route of exposure
First Aid Procedure	Inhalation	Remove to fresh air if respiratory irritation occurs get a medical attention immediately.
	Skin contact	Flush with large amount of water and soap.
	Eye contact	Remove to fresh air if eye irritation occurs get a medical attention immediately.
	Ingestion	N/A
Steps to be taken in case of spill		Dispose in approved landfill
Disposal method		Bury of incinerate in accordance with local, state and federal regulation. Not defined as hazardous by current provisions of RCRA.

SectionⅦ. Special protection information	
Ventilation	Local exhaust, especially if irritation occurs.
Protective clothing	Wear gloves when handling hot material.
Respiration protection	Not normally necessary.
Eye protection	Not normally necessary.
Other protective equipment	Not normally necessary.

SectionⅧ. Special precaution	
Precautions to be taken in handling and storage	In operations such as heat welding or thermoforming involving heat sufficient to cause melting of the polymer, irritating fumes may be evolved. Adequate ventilation should be provided.
Other precautions	Avoid inhalation of processing fumes.

LG Chem, Ltd. Cheongju Plant

Industrial Materials Division

M. S. Kim / General Production Manager

Warranty:

LG XPRO manufacturer offers its XPROgeo series in writing with a standard warranty that outlines weathering and chemical compatibility on a pro-rata basis for 10 years. Before issuing a warranty, LG Chem will conduct its own testing based upon research believed to be reliable.

CERTIFICATION OF INSTALLATION

1. PROJECT
   ① Name: _____

   ② Location: _____

   ③ Warranty period: _____years

   ④ Installation completed: _____ / _____ / _____

2. APPLICATION
   ① Product: _____

   ② Installation qty: _____sq ft

   ③ Description of application type: _____

   _____

   ④ Description of exposure type: _____

   _____

3. REQUIRED PROPERTIES
   ① Physical properties: _____

   _____

   ② Chemical properties: _____

   _____

4. OWNER INFO
   ① Name: _____

   ② Contact: _____

   ③ Address: _____

Please contact LG Chem offices for warranty & material consulting and immersion test.