



CARLISLE'S **GeoMembrane**

Carlisle Geosynthetics Applications List

2004

Carlisle Polypropylene GeoMembrane™ is suitable as a liner, cover or cap for the following end use applications. Note that Potable Grade can be used as a replacement for Industrial Grade but Industrial Grade is limited to non-potable water contact. Carlisle GeoRod™ and GeoFlashing™ non-reinforced polypropylene membrane can be used for potable and industrial applications.

APPLICATION	POTABLE GRADE	INDUSTRIAL GRADE
Agricultural waste pit / tank (see note 1)	X	X
Animal drinking water tank / pond (see note 3)	X	
Aquaculture tank or reservoir (see note 4)	X	X
Biogas floating cover	X	X
Black liquor pond / tank (see note 1)	X	X
Decorative pond with fish (see note 4)	X	X
Decorative pond without fish	X	X
Fire water tank or reservoir	X	X
Fish hatchery tank / pond / canal (see note 4)	X	X
Industrial leachate collection pond (see note 1)	X	X
Industrial water containment (see note 1)	X	X
Irrigation pond	X	X
Mining applications (see note 1 & 2)	X	X
Municipal wastewater treatment tank / settling pond	X	X
Potable water reservoir (see note 3)	X	
Potable water tank liner (see note 3)	X	
Power plant boiler blow down pond	X	X
Power plant fly ash disposal pond liner	X	X
Water conveyance (aqueduct, canal, flume)	X	

Note 1: Carlisle polypropylene GeoRod, GeoFlashing and GeoMembrane are resistant to a wide variety of chemicals. It is the specifier's responsibility however to determine if polypropylene (GeoMembrane and accessories) is "fit-for-use" with the particular material that will come in contact with or be contained by the membrane. Consideration must be given to the contained material's temperature, concentration and mixture synergism affects.

Note 2: Mining applications are unique in that abrasive materials may be suspended in water flowing over the geomembrane. It is the specifier's responsibility to determine if polypropylene has satisfactory resistance to abrasion for the specific end use application.

Note 3: Use Potable Grade Carlisle GeoMembrane for applications where potable water contacts the membrane. Testing and Listing by NSF International to ANSI/NSF Standard 61 (Drinking Water System Components – Health Effects) is limited to “cold water” (23° C) and “tanks / ponds, etc.” equal to or greater than 5000 U.S. gallons. Carlisle GeoMembrane is **not** NSF tested, certified or listed for domestic hot (60° C) or commercial hot (82° C) potable water contact.

Note 4: Carlisle Polypropylene Geomembrane was evaluated for fish toxicity using ASTM E729¹ Standard Guide for Conducting Acute Toxicity Tests on Test Materials with Fishes, Macro-invertebrates and Amphibians. Based on the results of this testing with common goldfish it is considered “fish safe” for many aquaculture applications.

It is well known that different species of fish have a wide variation in their tolerance to unusual water chemistry, temperature, dissolved oxygen, etc. If there is any question about the use of polypropylene geomembrane with a particular species then specific testing using ASTM E729 is recommended.

GeoRod, GeoFlashing or Geomembrane shall not be utilized for containment of hazardous materials or waste (poisonous, toxic, corrosive, flammable, etc.). Carlisle geosynthetic materials do not have long term chemical resistance to mineral oil, motor oil, gasoline, kerosene, diesel fuel, aviation fuel(s), some organic solvents and gases, bleach (sodium hypochlorite, etc.) solutions and strong oxidizing acids, etc.

¹ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959