



*Innovative geosynthetic solutions for applications in the primary,
civil and construction industries*

Geosynthetic Materials
Geoloy® 328
530

WONPOONG



Geoloy®

Wonpoong's geosynthetic solutions provide significant durability and remarkable chemical resistance. The Geoloy series is used for a wide range of geosynthetic reinforcement products and terrain stabilization designs. Geoloy's strong resistance to chemicals and weathering is specially designed for applications with landfills, manufacturing pond liners, municipal wastewater ponds, geosynthetic containment lining products, oil storage, and various chemical protection situations.

WONPOONG

Since it was founded in 1973, Wonpoong has continually evolved and expanded its highly diversified portfolio of solutions. While improving our product spectrum, we have created measurable and meaningful value for our customers, employees and shareholders. Our core values are customer orientation, integrity, accountability, environmental protection, and innovation.

By listening and responding to market demands, Wonpoong has combined its long-standing industry knowledge and commitment to sustainability to develop some of the most innovative product solutions. Armed with a state-of-the-art R&D Center and the ISO:9001 and ISO:14001 certified manufacturing facilities, we have strived to remain at the forefront of the industry.

Wonpoong is comprised of 6 divisions: Signs and Digital Media (Any Sign Any Flex), Industrial Fabrics (SuperTarp), Structural Fabric (Tentation), Drop-Stitch Fabric (AquaFloat), Geosynthetic Materials (Geoloy), and Environmentally Friendly Materials (Innogreen).

Signs and Digital Media

**anySign!
anyFlex!**

Industrial Fabrics

SuperTarp®

Structural Fabric

tentation®

Drop-Stitch Fabric

AQUAFLOAT®

Geosynthetic Materials

Geoloy®

Environmentally Friendly Materials

INNOREEN®

WONPOONG

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Geosynthetic Materials

Geoloy®

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Key features of the Geoloy® series

- Remarkable Resistance to Chemicals
- Weather Resistance
- High Durability
- Easy-to-Fabricate Material



Remarkable Resistance to Chemicals

As indicated in the ASTM D543-87 modified standard, Wonpoong conducted the immersion test that evaluates resistance to chemical reagents and simulates performance in potential end-use environments. Chemical reagents can include lubricants, fuels, cleaning agents, acidic materials or anything else with which the Geoloy products may be expected to come in contact. As shown in the Chemical Resistance data sheets on the next page, Geoloy has a remarkable resistance to a wide range of chemical reagents.

Weather Resistance

Resistance to weathering is the stability against various factors that may influence the durability. Our R&D center has tested the effects of water, UV exposure, and high and low temperature circumstances on Geoloy, and thereby successfully fulfilled the ASTM D6878 standard.

High Durability

We ran several tests, including an observation of changes in the dimensions, appearance, strength properties such as the tensile and tear strengths and adhesion under various exposure conditions and temperatures. With over four decades of industry experience, our manufacturing system and staff have industry-comprehensive knowledge. Hence, Geoloy has optimized its durability and features.

Easy-to-Fabricate Material

The Geoloy series is compatible with a comprehensive range of welding equipment; it is suitable for high frequency welding, hot air welding, or any other welding-adhesion equipment. Geoloy is simple and easy to fabricate, since its material is flexible, yet structurally stable and strong.



Geomembrane Chemical Resistance

No	Chemical	Geoloy 328	Geoloy 530	No	Chemical	Geoloy 328	Geoloy 530
1	Acetic Acid (5%)	A	A	32	Lactic Acid	A	A
2	Acetic Acid (50%)	C	C	33	Linseed Oil	A	A
3	Acetone (99.5%)	C	C	34	Magnesium Chloride	T	T
4	ASTM #1 Oil	A	A	35	Magnesium Hydroxide	T	T
5	ASTM #2 Oil	A	A	36	Methanol	A	A
6	ASTM #3 Oil	A	A	37	Methyl Ethyl Ketone	C	C
7	Ammonium Phosphate	T	T	38	Methylene Chloride	C	C
8	Ammonium Sulfate	T	T	39	Mineral Spirits	A	A
9	Aqua Regia	T	T	40	Naphtha	A	A
10	ASTM Fuel A (=Isooctane)	A	A	41	Nitric Acid (5%)	A	A
11	ASTM Fuel B	B	B	42	Nitric Acid (50%)	C	C
12	ASTM Fuel C	B	B	43	Perchloroethylene	B	B
13	ASTM Fuel F (=Diesel)	A	A	44	Phenol	C	C
14	Benzene (99.5%)	C	C	45	Phosphoric Acid (50%)	A	A
15	Calcium Chloride (30%)	A	A	46	Phosphoric Acid (85%)	C	C
16	Calcium Chloride Solutions	T	T	47	Phthalate Plasticizer	C	C
17	Calcium Hydroxide	T	T	48	Salt Water (25%)	A	A
18	Chlorine Solutions (0.3%)	C	C	49	Sea Water	A	A
19	Corn oil	A	A	50	Sodium Acetate Solutions	T	T
20	Cyclohexane	B	B	51	Sodium Bisulfite Solutions	T	T
21	Ethanol (=Ethyl Alcohol)	A	A	52	Sodium Hydroxide (40%)	C	C
22	Ethyl Acetate	C	C	53	Sodium Phosphate	A	A
23	Ethylene Glycol	A	A	54	Sulfuric Acid (50%)	A	A
24	Furfural	T	T	55	Sulfuric Acid (97%)	B	B
25	Gasoline	B	B	56	Tannic Acid (10%)	C	C
26	Glycerin	A	A	57	Tannic Acid (40%)	C	C
27	Hydrochloric Acid (10%)	A	A	58	Tetrahydrofuran	C	C
28	Hydrochloric Acid (36%)	C	C	59	Toluene	C	C
29	Isopropyl Alcohol	A	A	60	Turpentine	A	A
30	Ivory Soap	A	A	61	Vegetable Oil	A	A
31	Kerosene	A	A	62	Xylene	C	C

- A Little or no effect
B Somewhat effect
C Severe effect
T Likely to be severe effect

The information regarding chemical resistance and physical specifications is intended to serve as a general guide. The information listed is more focused on variables in actual use, and does not cover all chemical or physical variables. The material has been thoroughly evaluated under actual or simulated service conditions.

Geoloy conformed to the ASTM D543-87 modified specifications in chemical resistance, fulfilled the ASTM D6878 in weathering resistance, and also followed the ASTM D471, D741, D751, D1204, D2136, D3389, D4833, and D6878 in the respective related physical properties as indicated on the data sheet.

Armed with staff with over four decades of industry experience, a state-of-the-art manufacturing system and R&D center, the Geoloy has optimized its durability and resistance performance.

We also provide advanced customization features to help you find optimal solutions. We will develop an innovative solutions best suited to our client's needs



Physical Specifications

Property	Method		
Base Fabric Type	ASTM D 751	Polyester	Polyester
Base Fabric Weight	ASTM D 751	3.4 oz/yd2 (115 gsm)	6.5 oz/yd2 (220 gsm)
Finished Coated Weight	ASTM D 751	28.0 ± 2.0 oz/yd2 (952 gsm ± 68g/sq.m)	30 ± 2.0 oz/yd2 (1,020 gsm ± 68g/sq.m)
Thickness	ASTM D 751	0.78mm(31mils)	0.85mm (33mils)
Tensile Strength(Cut Strip)	ASTM D 751	252 / 232 lb min. (1,121/1,032 N min.)	440 / 420 lb min. (1,957/1,868 N min.)
Tensile Strength(Grab)	ASTM D 751	351 / 323 lbf/in min. (1,561/1,437 N min.)	560 / 600 lbf/inch min. (2,491/2,669 N min.)
Tear Strength(Trapezoid Tear)	ASTM D 751	60 / 55 lb. Min. (269/245 N min.)	78 / 73 lb. Min. (347/325 N min.)
Breaking Yield Strength	ASTM D 751 (Grab Tensile)	350 / 300 lb. Min. (1,557/1,334 N min.)	680 / 680 lb. Min. (3,025/3,025 N min.)
Low Temperature Resistance	ASTM D 2136 (4hrs-1/8in Mandrel)	Pass -35°C (Pass -30°F)	Pass -35°C (Pass -30°F)
Dimensional Stability	ASTM D 1204	0.25% max. each direction	0.25% max. each direction
Blocking Resistance	ASTM D 751 180°F/82°C	#1 Rating max.	#1 Rating max.
Hydrostatic Resistance	ASTM D 751	300 psi min. (2.07 Mpa min.)	800 psi min. (5.51 Mpa min.)
Adhesion	ASTM D 751	30 lbf/2" min. (132N/5cm)	30 lbf/2" min. (132N/5cm)
Adhesion-Heat Welded Seam	ASTM D 751	34 lbf/2" min. (149N/5cm)	40 lbf/2" min. (175N/5cm)
Dead Load Seam Strength	ASTM D 751	Pass 100 lb./in. @ 70° F (Pass 444 N/2.54 cm @ 21° C) Pass 50 lb./in. @ 160° F (Pass 220 N/2.54 cm @ 70° C)	Pass 240 lb./in. @ 70° F (Pass 1,068 N/2.54 cm @ 21° C) Pass 120 lb./in. @ 160° F (Pass 534 N/2.54 cm @ 70° C)
Abrasion Resistance	ASTM D 3389 H-18, 1kg Load	6,200 cycles before fabric exposure, 12mg/100 cycles max. weight loss	7,000 cycles before fabric exposure, 8.7mg/100 cycles max. weight loss
Water Absorption	ASTM D 471, Section 12 7 Days	0.001 kg/m² @70° F/21° C 0.003 kg/m² @212° F/100° C	0.001 kg/m² @70° F/21° C 0.003 kg/m² @212° F/100° C
Weathering Resistance	ASTM D 6878	-	-
Wicking	ASTM D 751	1/8 in	1/8 in
Bursting Strength	ASTM D 751	435 lb. min. (1,934 N min.)	900 lb. min. (4,000 N min.)
Coefficient of Thermal Expansion/Contraction	ASTM D 696 (Static force : 100mN, Test temperature : -30 ~ +30° C)	0.64 x 10 ⁻⁵ cm/cm ° C max.	0.64 x 10 ⁻⁵ cm/cm ° C max.
Puncture Resistance	ASTM D 4833	156 lb. min. (694 N min.)	275 lb. min. (1,223 N min.)
Environmental/ Chemical Resistance Properties	ASTM D 741	See Chemical Resistance Table	

