

## Two-ton Bag weather-resistant, large-sized sandbag: Table of performance testing results

Item		Test method	Evaluation details	Performance stipulated values	Two-ton Bag weather-resistant, large-sized sandbag (2t Bag)		
					BOS-20N-1PF	BOS-20N-3PF	
Performance required for materials [Fabric]	Initial strength deformation characteristics	Initial breaking strength	JIS L 1096 compatible	Strength	Bag material N/cm *1	Lengthwise 430 or more Crosswise 340 or more	Lengthwise 430 or more Crosswise 340 or more
		Initial extension		Extension rate	Sewing N/cm *1	No sewing in the body part	No sewing in the body part
	Durability	Weather resistance	JIS L 1096 compatible (8.3) (Tester JIS B 7753) [Ultraviolet ray accelerated exposure] Short-term 300 hr, long-term 900 hr	Strength	Lengthwise 240 N/cm or more	572	556
					Crosswise 240 N/cm or more	412	404
					Sewing 240 N/cm or more	No sewing in the body part	No sewing in the body part
		Chemical resistance	JIS L 1096 compatible (Tester JIS B 7753) Suspended load: 8kg/cm	Strength	Crosswise 160 N/cm or more	478	358
					Sewing 160 N/cm or more	No sewing in the body part	No sewing in the body part
					Sulfuric acid (pH 2) 240 N/cm or more	420	428
	Heat resistance	JIS Z 1651 compatible JIS L 1096 compatible	Strength	Sodium hydroxide (pH 12) 240 N/cm or more	426	426	
				Sodium chloride 240 N/cm or more	408	440	
				240 N/cm or more	422	434	
	Cold resistance	JIS Z 1651 compatible JIS L 1096 compatible	Strength	240 N/cm or more	414	434	
				240 N/cm or more	414	434	
Environmental resistance	Elution test	Health Ministry Notification No. 370 of 1959 compatible	Elution performance	There should be no elution of harmful substances	Within the standard values	Within the standard values	
Drainage and permeability	Pore diameter	ASTM D 4751 compatible	O <sub>95</sub>	Approximately 1.0mm or less	0.118	0.212	
	Permeability	JIS A 1218 compatible	Permeability coefficient	1.0×10 <sup>-2</sup> cm/s or more	1.11×10 <sup>-2</sup>	1.15×10 <sup>-2</sup>	
Performance required from materials [Sling belt materials]	Initial breaking strength	Breaking strength	Strength	- kN/ belt *1	24 or more	34 or more	
				Weather resistance	JIS D 4604 compatible JIS L 1096 compatible (Tester JIS B 7753)	30kN/ belt or more (4-point suspension)	41.6
	Heat resistance	JIS Z 1651 compatible JIS D 4604 compatible	30 kN/ belt or more (4-point suspension)			41.8	40.7
			Cold resistance	30 kN/ belt or more (4-point suspension)	42.4	41.7	
Performance required from sandbag [Bag body]	Compression strength characteristics	"Weather-resistant, Large-sized Sandbag Layered Construction Method" Design and Installation Manual performance evaluation test	Compression strength	200 kN/m <sup>2</sup> or more	305	299	
				Friction characteristics	Friction coefficient	Between bag bodies 0.5 or more	0.62
	Between earth and bag body (Gravel soil) 0.6 or more		0.84			0.84	
	(Sandy soil) 0.5 or more		0.71			0.71	
	Lifting and lowering characteristics		Presence of damage	After repeated lifting and lowering for the designated number of times (10 times), there should be no cracks or damage in the lifting materials or fabric that would allow the filling material to spill out.	Compatible	Compatible	
				Presence of damage	After dropping for the designated number of times (three times), there should be no cracks or damage in the fabric that would allow the filling material to spill out.	Compatible	Compatible
Shock and dropping characteristics (Impact resistance)	Shape maintaining characteristics	Shape dimensions	The shape (height and diameter) must be satisfied				
			Diameter 1.1m±6%	Compatible	Compatible		
Used materials				Fabric (Bag body)	Polypropylene PP Black	Polypropylene PP Black	
				Fabric (Base part)	Polypropylene PP Black	Polypropylene PP Black	
				Sling belts	Polypropylene PP Black	Polypropylene PP Black	

\*1: These are the quality control strengths during manufacture of the bag material fabric and lifting material, which have separately defined standard values.