

Spill Absorbent Product Testing

Summary of Polypropylene Absorbents

The SpilMax® range of polypropylene absorbents are hydrophobic in nature; meaning they will absorb oil-based liquids but will repel water. Manufactured from polypropylene, our absorbent range is cost effective and has a high absorbency capacity. Even when fully saturated, they will still float on water. They will also not deteriorate or tear, even when under extreme industrial use. Our absorbent materials are chemical-resistant and will absorbent a wide variety of petrochemicals and petroleum-based solvents without degrading or reacting.

Product Types

CLASSIFICATION	
Type I –	Floor Sweep (loose organic)
Type II –	Absorbent Rolls
Type III –	Absorbent Pads and Pillows
Type IV –	Absorbent Mini Booms



Product Performance

Product Testing

Chatoyer Environmental is committed to deliver a quality range of spill response products under the SpilMax® brand. Our products have undergone extensive absorbency testing to ensure its performance meets the expectations required by your organisation.

Floor Sweeps

Our floor sweeps have been extensively tested as per Australian Standards, USEPA, ASTM, ISO, APHA, CHSB and others to demonstrate they meet or exceed all pertinent standards. The tests conducted are summarised as follows:

Test Name	Test
Environmental Toxicity	ASTM D5560 (Microtox)
TCLP Leachate Test	USEPA 1311, USEPA 8015B
Sorption Capacity / Paint Filters Test	USEPA 9095 (See certificate)
Proof of Absorption	ASTM F716-82 (11.2)
Pressure Release Test	USEPA 9096A
Human Toxicity	EPS 1/RM/10
Vapour Reduction	TVOC by GC/MS
Flammability	USEPA 1030
Pathogenic Bacteria	AS1766
Pesticide Residues	USEPA 8270C
Particle Size	ISO 13320-1:1999
Permissible Exposure Limit	NOHSC, ACGIH, or NIOSH
Nutrient Content	Alpha 4500



Polypropylene Absorbents

Chatoyer Environmental has conducted internal absorbency testing to ensure the SpilMax[®] polypropylene absorbent range meets our stringent quality assurance standards. The capacity results of our absorbent testing are as follows:

Code	Product	Absorption Capacity
CH1308	Absorbent Rolls	320L / roll
CH1320	Absorbent Pads	1L / pad
CH1514	Absorbent Pillows	4L / pillow
CH1506	1.2m Mini Booms	4L / mini boom
CH1507	1.8m Mini Booms	6L / mini boom
CH1509	3.0m Mini Booms	8L / mini boom
CH1726	Marine Booms	20L / boom



Photo: Hydrophobic test

ASTM F726-06 Testing

Oil Absorption-Short Test

ASTM Test Method F726-06 "Sorbent Performance of Absorbents" gives idealized laboratory data to test an absorbent product's maximum oil capacity. Under these guidelines, representative samples of the SpilMax[®] polypropylene absorbent range (Type III and Type IV) were treated with two solutions of 50 weight motor oil and diesel fuel. Each product Type was tested 3 times with each solution and the results of the 3 tests were averaged to obtain an accurate representation of the absorption capacity of the SpilMax[®] range.

Calculation Method:

Calculate oil absorbency as the ratio of oil absorbed to dry absorbent weight:

$$\text{Oil absorbency} = S_s/S_o$$





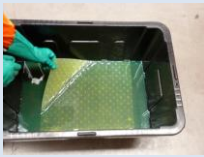
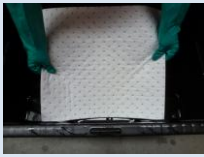
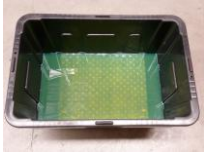
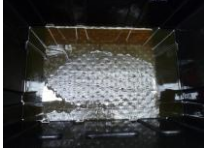






Where:

S_o = initial dry absorbent weight

S_{ST} = weight of absorbent samples at end of oil test

$S_s = (S_{ST} - S_o)$ net oil absorbed

Method

	Procedure	a) Diesel Fuel (Pad test shown)	b) Motor Oil (Pad test shown)
1	Product samples were weighed (dry weight calculations recorded)		
2	Cells were filled with 10L of solution Test a): Diesel fuel Test b): Motor oil (20W-50)		
3	Samples were placed into the cells of solution		
4	Samples were left for 15mins in the solution to allow for saturation		
5	Once saturated, samples were removed from the cell and left to drain on a rack for 30secs		
6	The oil-saturated weight of samples were then recorded		
7	Steps repeated for other products - pillow application shown in photo 1 - boom application shown in photo 2		

Date of test: 1st of December 2011

This test was conducted under controlled conditions in 23°C temperature

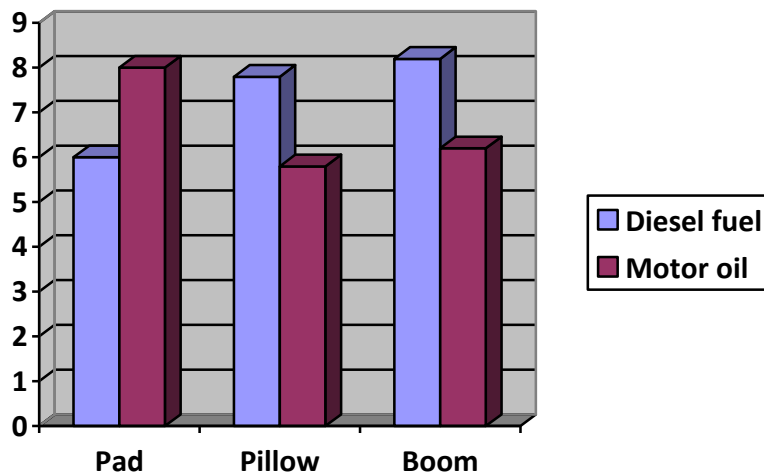
For further information please refer to the ASTM F726-06 Standard Test Method

Results

Diesel Fuel			
Product Type	Type III – Pad (480mm x 430mm)	Type III – Pillow (400mm x 500mm x 50mm)	Type IV – Boom (1.2m x 75mm)
Dry weight of product (S_o)	100g	550g	300g
Oil-saturated weight (S_{ST})	700g	4,850g	2,750g
Weight of oil (S_s)	600g	4,300g	2,450g
Absorption (S_s/S_o)	6:1	7.8:1	8.2:1

Motor Oil			
Product Type	Type III – Pad (480mm x 430mm)	Type III – Pillow (400mm x 500mm x 50mm)	Type IV – Boom (1.2m x 75mm)
Dry weight of product (S_o)	100g	550g	300g
Oil-saturated weight (S_{ST})	900g	3,750g	2,150g
Weight of oil (S_s)	800g	3,200g	1,850g
Absorption (S_s/S_o)	8:1	5.8:1	6.2:1

Absorption capacity of SpilMax® range (times its weight ratio)



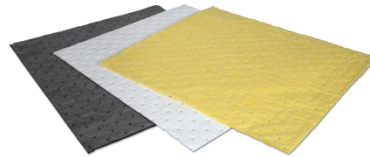
Product Information

Absorbent Pads & Pillows

The SpilMax® range of polypropylene pads and pillows are suitable for the clean-up of hydrocarbon spills (including oils and fuels), even on water.

Application of Pads: use to rapidly absorb hydrocarbon spills.

Product Information	
Code	CH1320
Pack size	Single or 100
Length	480mm L
Width	430mm W
Capacity	1 L / pad



Application of Pillows: place under slow leaks and drips to absorb spills.

Product Information	
Code	CH1514
Pack size	Single or 10
Length	400mm L
Width	500mm W
Height	50mm H
Capacity	4 L / pillow



Spill Absorbent Products

Absorbent Mini Booms

The SpilMax® range of polypropylene mini booms are filled with polypropylene hydrophobic fibre and therefore suitable for the containment of hydrocarbons (including oils and fuels), even on water.

Application of Mini Booms: contain hydrocarbons with booms by shaping them around the spill to prevent it from spreading further.



Product Info	1.2m	1.8m	3.0m
Code	CH1506	CH1507	CH1509
Pack size	Single or 10	Single or 10	Single or 6
Length	1.2m L	1.8m L	3.0m L
Diameter	75mm D	75mm D	100mm D
Capacity	4 L / boom	6 L / boom	12 L / boom

Other

Quality Assurance

We have an extensive quality assurance system in place to monitor the quality of each batch of absorbent products.

Samples and Demonstrations

We are able to provide you with product and video demonstrations or samples within any of our product range under your consideration as required.

Maintenance and Support

Our technical staff are on-call to assist you with any product enquires or to provide you with any technical support on our dedicated 1300 line.