



Oil Sorbents

Use

For control of spills of hydrocarbons on water or land. 3M™ Oil Sorbents repel water and float. They are typically used on water to contain and absorb hydrocarbons that are on the surface or in an emulsion in the water.

Product Description

3M™ Oil Sorbents are made from inert, synthetic fibres principally polypropylene for 'T Series' oil sorbents and polypropylene and polyester for 'HP Series'. They are available in a wide range of formats and are lightweight and dust-free. They have a high absorption capacity which minimises the amount of waste for disposal. HP Series antistatic products have a charge dissipating polypropylene scrim and are packaged in charge dissipating film.

Colour

White (sheets and rolls) and red / orange (booms and pillows).

Selection Guide

- **Booms:** May be connected together to form barriers. These are anchored at each end and positioned across still / moving water to contain, channel and absorb oil spills. Suitable for use on rivers and in harbours.
- **Pillows:** Used for bulk absorption of oil on land or water. Particularly useful in drains to act as interceptors.
- **Sheets:** A highly adaptable format. They can be used on water to pick up oil covering large surface areas and in wiping applications.
- **Rolls:** For fast coverage of large surface areas of water, they can be easily torn to length. Also used as a mat to keep shorelines or banks clean and to place used sorbents upon.
- **Sweep:** Used to pull over still water to remove surface films.
- **Minibooms:** Generally on-land applications to contain and absorb spills.
- **Antistatic Products:** The HP Series antistatic products are designed for use in low temperatures and low humidity where static sparking needs to be avoided.
- **Multiformat:** Combines four formats in one product. It can be used as booms, pillows, sheets or rolls.
- **Tanker Spill response kits:** The modern effective way to control and clean up spills, particularly those resulting from liquid fuel deliveries.

Physical Data

NUMBER	SIZE (CM)	NO./ CASE	CASE SORBENCY (LITRES)	CASE WEIGHT (KG)
Sheets				
T151	53 x 39	200	150	8.5
T156	53 x 39	100	135	7.5
HP156	48 x 43	100	142	4.5
Rolls				
T100	96 x 4000	1	276	15.0
T150	48 x 4000	1	138	7.5
HP100	96 x 4400	1	276	9.0
Pillows				
T30	18 x 38	16	32	3.3
T240	38 x 55	10	100	10.5
Booms				
T270	20ø x 300	4	260	22.0
T280	2 x 10ø x 300	4	152	11.0
T270GA	20ø x 500	2	220	17.0
Minibooms				
T4	7.5ø x 120	12	45	5.5
T8	7.5ø x 240	6	45	5.5
T12	7.5ø x 360	4	45	5.5
Sweep				
T126	48 x 3000	1	95	7.5
Multiformat				
T-F2001	12 x 1520	3	119	8.2



Tanker Spill Response Kits

- **Product TSK15 - Absorbency: 15l**

Contain: 25 Sheets T151, 2 Pillows T30, 1 Disposal Bag + Tie,
1 Disposal Guide + Label

- **Product TSK30 - Absorbency: 30l**

Contain: 50 Sheets T151, 2 Minibooms T4, 1 Disposal Bag + Tie,
1 Disposal Guide + Label

Absorption / Sorbency

The case sorbency quoted in the table is based on the American Standard Test Method (ASTM) F726-81 using a medium viscosity fluid (20 weight motor oil). Another method of measuring absorbent performance is by calculating the sorbency ratio. This is the ratio of liquid weight absorbed to the dry absorbent weight.

$$\text{Sorbency} = \frac{\text{wet weight} - \text{dry weight}}{\text{dry weight}}$$

The sorbency ratio and speed of absorption depend upon the ambient temperature, the polarity of the liquid, its surface tension and viscosity. For 3M™ 'T series' Oil Sorbents the sorbency ratio is 10-15 and for the 'HP series' 15-20 for most of the common hydrocarbons.

Typical Liquids Absorbed

3M™ Oil Sorbents are suitable for absorbing hydrocarbons and non-polar organic solvents, eg; oil, paraffin, diesel, benzene, alcohols, toluene, trichloroethane, esters and ethers.

Limitations of Use

Do not use on aqueous liquids or aggressive liquids: strong acids, caustic oxidisers or reactive chemicals. In particular there is a risk of degradation with the following: Oleum, Chlorosulphonic acid, Liquid bromine, Fuming nitric acid, Chromic acid, Sulphuric acid and Hydrogen peroxide. 3M recommends that a compatibility test be carried out prior to using the absorbent with the liquid concerned. For use in temperatures over 60°C it is essential that such a compatibility test is made prior to use.

Precautions

3M™ Oil Sorbents are not in themselves hazardous products, however, they take on the characteristics of the liquids they absorb. Adequate precautions should be taken when handling or storing hazardous / inflammable materials and appropriate personal protective equipment should be worn. Users should be informed of the risks incurred in use, storage and disposal of used sorbents.

Disposal

Dispose of used sorbents only in accordance with local and national regulations. Disposal companies should be consulted for their recommendations. Options may include incineration and landfilling depending on regulations.

Waste Minimisation

3M recommends that waste streams should wherever possible be minimised. Sorbents by 3M promote minimisation by only being a small part of the total waste. In addition, where laws allow, 3M™ Oil Sorbents can be disposed of by incineration yielding less than 0.02% ash (ASTM D-482). The high energy value of the sorbents (46,000 KJ / Kg) is also favourable for incineration and waste-to-fuel systems. Furthermore, sorbents by 3M may be wrung out and reused (90% recovery using mechanical wringing according to ASTM F726-81). The recovered liquid may itself then be reused or disposed of.

Flammability

3M™ Sorbents have been tested by an independent test house for flammability characteristics. Tests were carried out on long-term storage, heat build-up and ignition from three sources: spark, flame and cigarette using oil and diesel at 0%, 50% and 100% saturation levels. Tests were compared to testing on clay granules and sawdust. The results which are available in a full report can be summarised: "3M™ Sorbents take on the properties of the liquid absorbed and do not present a greatly increased flammability hazard over other common absorbents. No heat build-up occurs in long-term storage".



Occupational Health & Environmental Safety Group

3M United Kingdom plc

3M Centre,
Cain Road, Bracknell
Berkshire RG12 8HT
Tel: 0870 60 800 60
www.3M.co.uk/ohes

3M Ireland Limited

The Iveagh Building
The Park
Carrickmines
Dublin 18
Tel: 1 800 320 500