

LIST OF HYDROPHOBIC FLOATING SORBENT TO BE USED AT SEA AND IN INLAND WATERS TESTED BY CEDRE

SORBENT TYPE A (BULK, "SPAGHETTIS")

The table below gives a non-exhaustive list of sorbent products tested according the **NFT 90-360** norm by Cedre's laboratory measured using crude Arabian Light, topped at 110°C (viscosity 42-45 cP at 20°C) for their efficiency and specifies:

- the sorbent capacity which allows a comparison of the products performances.
- the nature of the sorbent material, which is an essential element to define the storage conditions and the disposal of the product (eg: incineration).

Only products which meet to the following criteria are listed below:

1. sorbent capacity: sorbent capacity in weight higher than 5 or sorbent capacity in volume higher than 0,5 (calculated according to the apparent density of the product)
2. hydrophobia: retention capacity of water/retention capacity of oil equal or below 0,25
3. stability: the product must stay stable and un-friable for keep its properties

NAME OF THE PRODUCT	NATURE OF THE MATERIAL	ASPECT	CHARACTERISTIC OF THE SORBENT	ABSORBENT CAPACITY BY WEIGHT	SUPPLIER
BIOLUE NATURAL ABSORBER	Biopolymer	Beige Flake	Bulk	19,8	BIOSOLVIT LTDA
CORKSORB G01006	Vegetal (cork)	Dark brown granules	Bulk	8,3	AMORIM ISOLAMENTOS S.A.
CORKSORB G02025	Vegetal (cork)	Light brown granules	Bulk	3,0	AMORIM ISOLAMENTOS S.A.
DEUREX PURE	Polyethylene	White flake	Bulk	11,0	DEUREX AG
DIPSORB T	Polyurethane	Granulate	Bulk	19,0	SAITEC SA
ELCOSORB	Vegetal fiber (peat)	Brown fiber	Bulk	7,8	DIPTER
ERGON	Polypropylene	White fiber	« spaghetti »	10,6	ERGON
GRANOFIBRE_H	Vegetal (wood)	Light brown granulate	Bulk	4,7	SAS JACKY COURTIGNE
MICROSORB	Polypropylene	White flake	Bulk	13,7	SCHOELLER Industries S.A.S
MÖBIUS CARBON ADSORBENT	Carbon and cellulose	Black granules	Bulk	4,0	MOBIUS GROUP LLC
REPSORB SPAGHETTI	Polypropylene	White fiber	Bulk	9,0	REP
VERDYOL SORBENT	Vegetal fiber	Cream-coloured fiber	Bulk	12,5	VERDYOL INTERNATIONAL

NOTE ABOUT THE USE OF DATA OF TABLE

The sorbent capacity in weight in the table, is the retention capacity when the sorbent is saturated, with oil (crude Arabian Light, topped at 110° C). For each product, it is possible to determine the theoretical price per treated liter, by combining the retention capacity in weight (sorbent capacity) with the price of the sorbent.

The price per treated liter of oil is a good criterion to compare the efficiency of various sorbents from an economic point of view.

Beyond this criterion, for obvious operational reasons, it is important to evaluate the sorbent capacity in volume, which is the volume of sorbent needed to recover a given volume of pollutant. This can be calculated by taking into account the apparent density of the product in its packaging, available from the supplier, and the sorbent capacity in weight.

Some manufacturers might modify the composition or the nature of the sorbent they market; in case of doubt, do not hesitate to consult Cedre which keeps a sample of each product that is tested; this will allow, at least, a visual comparison to be made.

Additionally it is always possible to order a control test of the product.

This procedure of approval is carried out without prejudice to the procedures prescribed under the French law n°77-771 of 12 July 1977, as amended by French Law n°82-905 of 21 October 1982 relating to the control of chemicals and its complementary provision.

If the data provided by Cedre, valid for a three year period, is not updated by the manufacturer or retailer, Cedre cannot guarantee that the product is still available for purchase or that it is still presents the same characteristics as the sample tested.

LIST OF HYDROPHOBIC FLOATING SORBENT TO BE USED AT SEA AND IN INLAND WATERS TESTED BY CEDRE

TYPES B & C (SHEETS, ROLLS or MAT)

The table below gives a non-exhaustive list of sorbent products tested according the **NFT 90-360** norm by Cedre's laboratory measured using crude Arabian Light, topped at 110°C (viscosity 42-45 cP at 20°C) for their efficiency and specifies:

- the sorbent capacity which allows a comparison of the products performances.
- the nature of the sorbent material, which is an essential element to define the storage conditions and the disposal of the product (eg: incineration).

Only products which meet to the following criteria are listed below:

1. **sorbent capacity:** sorbent capacity in weight higher than 5
2. **hydrophobia:** retention capacity of water/retention capacity of oil equal or below 0,25
3. **stability:** the product must be sufficiently strong to be manipulated as it is without tearing

NAME OF THE PRODUCT	NATURE OF THE MATERIAL	ASPECT	CHARACTERISTIC OF THE SORBENT	ABSORBENT CAPACITY BY WEIGHT	SUPPLIER
DIPTER 2011	polypropylene	white	roll	11,9	DIPTER S.A.S.
ENV200-M	polypropylene	white	sheet	12,9	SPC, a Brady business
ERGON	polypropylene	white	mat	11,6	ERGON
HY4050X L	polypropylene	white	sheet	16,7	EUROSORB
OP100-E	polypropylene	white	sheet	13,0	SPC, a Brady business
POROIL	polyester polypropylene	brown	sheet	8,7	ENAC
POWERSORB HP 156	polypropylene	white	sheet	16,5	3M
POWERSORB T 156	polypropylene	white	sheet	13,9	3M
Ref 175 018	polypropylene	white	single-ply perforated pad	10,8	DENIOS SARL
REPSORB FEUILLE	polypropylene	white	sheet	12,6	REP
REPSORB FEUILLE HC	polypropylene	white	sheet	12,8	REP
VF240	polypropylene	pale green	sheet	14,6	HALECO
VF240W	polypropylene	pale green	sheet	11,2	HALECO

NOTE ABOUT THE USE OF DATA OF TABLE

The sorbent ability in weight in the table, is the retention capacity when the sorbent has reached on point, measured using crude Arabian Light, topped at 110° C. For each product:

It is possible to determine the theoretical price per treated liter, by combining the retention capacity in weight (sorbent ability) with the price of the sorbent.

The price per treated liter of oil is the only criterion by which the efficiency of the various sorbents can be compared from an economic point of view.

Some manufacturers may modify the composition or the nature of the sorbent they market; in case of doubt, do not hesitate to consult Cedre which keeps a sample of each product that is tested; this will allow, at least, a visual comparison to be made.

Additionally it is always possible to request a product test from *Cedre*.

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LIST OF HYDROPHOBIC FLOATING SORBENT TO BE USED AT SEA AND IN INLAND WATERS TESTED BY CEDRE

TYPES D & E (PILLOWS or SOCKS and BOOMS) And TYPES G (SPECIAL PRODUCTS)

The table below gives a non-exhaustive list of sorbent products tested according the **NFT 90-360** norm by Cedre's laboratory measured using crude Arabian Light, topped at 110°C (viscosity 42-45 cP at 20°C) for their efficiency and specifies:

- the sorbent capacity which allows a comparison of the products performances.
- the nature of the sorbent material, which is an essential element to define the storage conditions and the disposal of the product (eg: incineration).

Only products which meet to the following criteria are listed below:

1. sorbent capacity: sorbent capacity in weight higher than 10
2. hydrophobia: retention capacity of water/retention capacity of oil equal or below 0,25
3. stability: the product must stay stable and un-friable for keep its properties

NAME OF THE PRODUCT	NATURE OF THE MATERIAL	ASPECT	CHARACTERISTIC OF THE SORBENT	ABSORBENT CAPACITY BY WEIGHT	SUPPLIER
TYPES D & E - PILLOWS or SOCKS and BOOMS					
AVISORB PAD 16H	animal origin (recycled feathers)	beige	pillow	13,8	MOVENA S.A.
DIPTER 2030	polypropylene	white	boom	23,0	DIPTER S.A.S.
GO-1	mineral (Silicate)	grey fiber	boom	26,7	GREEN OCEAN B.V
HY810	polypropylene	white	boom	21,1	EUROSORB
MICROSORB	polypropylene	white	boom	23,0	SCHOELLER Industries S.A.S
Ref 128 553	polypropylene	white	boom	11,5	DENIOS SARL
TYPE G - SPECIAL PRODUCT					
BLOCKS – RIGID PLATE					

NOTE ABOUT THE USE OF DATA OF TABLE

The sorbent ability in weight in the table, is the retention capacity when the sorbent has reached on point, measured using crude Arabian Light, topped at 110° C. For each product:

It is possible to determine the theoretical price per treated liter, by combining the retention capacity in weight (sorbent ability) with the price of the sorbent.

The price per treated liter of oil is the only criterion by which the efficiency of the various sorbents can be compared from an economic point of view.

In the case of a boom, the results of tests apply to the constituent material of the boom and not to the boom itself; the performances of booms may vary slightly according to the state of compression of the material within the boom.

Some manufacturers may modify the composition or the nature of the sorbent they market; in case of doubt, do not hesitate to consult Cedre which keeps a sample of each product that is tested; this will allow, at least, a visual comparison to be made.

Additionally it is always possible to request a product test from Cedre.

This procedure of approval is carried out without prejudice to the procedures prescribed under the French law n°77-771 of 12 July 1977, as amended by French Law n°82-905 of 21 October 1982 relating to the control of chemicals and its complementary provision.

If the data provided by Cedre, valid for a three year period, is not updated by the manufacturer or retailer, Cedre cannot guarantee that the product is still available for purchase or that it still presents the same characteristics as the sample tested.