O.W.L®

ABSORBENT-CLEANING

O.W.L is a heat treated sphagnum peat which provides a uniquely effective way of protectionof the environment from hydrocarbons and chemical spills. The material is highly absorbent and quickly wipes up spilled oils and other contaminants in seconds.It differs from conventional cleaning materials because it completely absorbs hydrocarbon leaksIts cells are empty so that the
pollutant is completely encased in the moss structure. Applied to an oil spill – on the ground or in water – O.W.L cleans up 100%

• It is non-toxic to humans and the environment
• It is completely biodegradable
• Does not leave soil, water or groundwater contamination
• Can be used thermally

ABSOLUTE EFFICIENCY

• Absorbs spills completely in seconds
• Collects easily and without leaving any residue

• It is universal and easy to use: one solution for many oils, fuels and a wide range of chemicals
• Works on all surfaces

• Can be economically discarded due to its light weight

ABSOLUTE PERFORMANCE

• Has an absorption level of up to 100%
• Absorbs up to 8-10 times its weight
• Can be reused many times until fully saturated O,W,L is extremely light, very economical and easy to handle

• Encapsulates absorbed substances and does not release them again, even under increased pressure
• It is hydrophobic and therefore can be used in water

When used on wet surfaces, the performance of O.W.L is increased.

Comment:
Absorption capacity may vary depending on the substance

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Absorption capacity may vary depending on the substance

CRUDE OIL 100% ABSORPTION

Heavy oil, marine diesel, heating oil, engine oil, hydraulic oil, oil-based lubricants, petroleum, liquid paraffins, cooking oils and animal oils

GASOLINE FUELS
100% ABSORPTION
Diesel fuel, jet fuel

CHEMICALLY
100% ABSORPTION
Alcohols, hydrophobic solvents, polychlorinated biphenyls (PCBs), styrenes, turpentine and a whole host of other chemicals

100% ABSORPTION
Oil-based paints and varnishes, brake fluids, oil-based coolants, blood

WATER

O.W.L is light and buoyant. It is ideal for use in calm and rough waters. Spilled substances are immediately and completely absorbed. Even saturated O.W.L does not sink and can simply be vacuumed.

TERRAIN

O.W.L is 100% organic and completely non-toxic. If the soil is contaminated, O.W.L can be applied and mixed to absorb the spill and help re-cultivate the soil.

ROAD

O.W.L absorbs spills in seconds on industrial surfaces and asphalt. It does not settle into the pores of the lid. This guarantees fast traction recovery of up to 98% - ideal for use on all traffic routes and in motorsport

What is O.W.L.

O.W.L. is a Sphagnum peat moss product. Sphagnum peat moss grows in bog-type environments in various areas in North America and around the world, typically in cool and humid climates. In these environments, layers of the peat are deposited with each subsequent layer compacting the layer below. The waters in these bogs are acidic and inhibit the growth of other plant species which are not tolerant of this type of condition.

Peat is considered to be the beginning stage in the formation of coal. During compaction and burial the material undergoes aerobic degradation enriching the material in carbon. Further compaction and carbonization produces the common black colour of coal with which most people are familiar.

The peat grows in large boggy areas that are drained prior to harvesting. This is done by simply cutting a trench along the length of the section to be dewatered, allowing the water to drain away. Machines then harvest the peat by vacuuming loose material from the surface. The material is then removed for processing.

Members of this genus can hold large quantities of water inside their cells; some species can hold up to 20 times their dry weight in water, which is why peat moss is commonly used as a soil conditioner. When added to soil it provides a reservoir for water, improves the soil aeration, and prevents compaction. In this dried state, the peat is partially hydrophobic. With some effort or time, the peat will absorb water, improving the soils water retention capabilities. Over time (many years) the material will break down and degrade, but due to its slow degradation the peat is considered to be inert humic material that improves soil conditions without adding nutrients.

In recent years a new use for peat moss has been discovered. It can be used as an oil absorbent. This is the use and purpose of O.W.L. Peats are dried at temperatures which are carefully controlled to remove water from the material without damaging the skeletal framework of the peat. This allows the same structures which retained water when the peat was a living plant to now absorb hydrocarbons.

O.W.L. is a revolutionary, state-of-the-art oil and hydrocarbon absorbent made from the highest grade of Sphagnum Peat Moss. The high-grade raw material is significantly different from the garden variety peat commonly available in lawn and garden outlets.

O.W.L. raw material is primarily the leafy, stem-free, and least abundant part of the peat, harvested from peat bogs in its natural, partially biodegraded state.

At the factory, a unique, proprietary steam process causes the raw, natural peat to become "activated", adistinguishing attribute of the O.W.L. brand. The steam process causes a controlled reduction of natural moisturecontent while expanding the cellular structure of the peat, much like blowing up a balloon.

Throughout the manufacturing process, rigid standards of quality control are maintained to ensure O.W.L.'s consistent ability to outperform other absorbents.

The product is screened, tested and verified at each stage of the process of becoming "activated". O.W.L. is a superior absorbent with extraordinary characteristics.

Although very lightweight and easy to handle, O.W.L. absorbs oil at a superior rate of approximately one pound of product per gallon absorbed, using a "wicking" action best described as a magnetic-like attraction that pulls or draws the oil or hydrocarbon into the empty cells until there are no void areas remaining.

Amazingly, this "wicking"action does not occur on water or water-based solutions. O.W.L. is hydrophobic - it will float and resist absorption of water for weeks while simultaneously "wicking", sponging and encapsulating hydrocarbons floating on water's surface. Once encapsulated, oil will not normally leach out of O.W.L. to become a threat to the environment. O.W.L. holds the oil and with adequate oxygen, catalyses the natural biodegradation of oil into harmless byproducts through microbial action over a period of less than one year. O.W.L. has a remarkable ability to suppress vapours from volatile, flammable hydrocarbons such as gasoline. By reducing gasoline and similar vapours by up to 90%, risk of explosion is reduced, and a hazardous spill is made more manageable.

Characteristics of O.W.L.

- 100% Natural Biodegradable
- Oleophilic
- Hydrophobic
- Non-abrasive
- Easy disposal
- High energy value
- Absorbs oils, petrol, chemicals, paints and much more
- One kilo of product absorbs up to 8 litres of oil
- Non-toxic

Where Can O.W.L. Be Used?

Off-Shore Oil and Drilling Companies

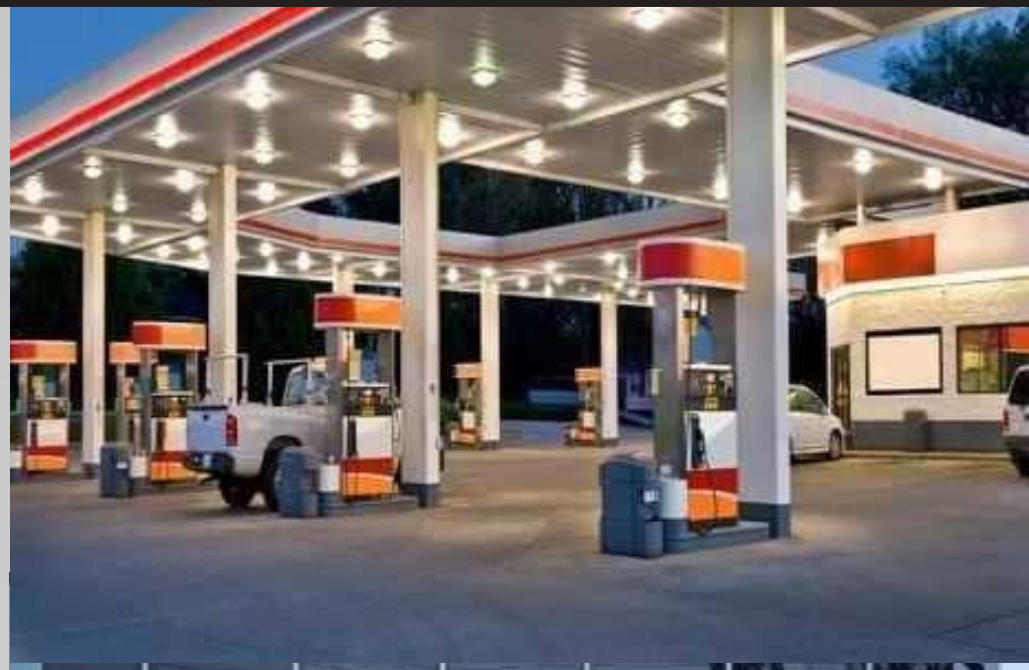
As drilling is performed on underwater grounds, crude oil sometimes gush forth to the water surface. O.W.L. is then sprayed on the spill to contain oil from spreading into the sea and pollute waters. Since the oil will not leach out once encapsulated by O.W.L., and it will biodegrade before the peat does, the sorbed product can either be left on the waters or removed to be landfilled or incinerated

Airports

Hundreds of planes use tons of fuel everyday. Authorities want their site to be clean and safe above all. If there is a spill it must be cleaned up right away in the most effective way possible. Any spill can be totally cleaned up in a matter of minutes with O.W.L.

Gas Stations

Minor spills are common in gas stations. They actually happen every day. A few ounces of O.W.L. will absorb and clean the spill right away. It is then brushed up and removed. The surface is clean in a matter of seconds. Gas is now encapsulated in the peat and will not damage the environment.



Fire Departments

A bucket of O.W.L. comes very handy on a fire truck. It can clean up a spill in a fast, easy, and environmentally safe way. It might even help avoid propagation of oil or gasoline when a fire is burning. More and more fire departments in America are switching from traditional clay products to O.W.L. It makes a difference between creating additional environmental pollution on the roads, and a safe, effective, and cost-efficient cleanup.

Spill Response Team

A considerable spill occurs at a factory or at the municipal depot. Professionals at major response team will carry dehydrated peat moss because it will soak the oil right up and they know that it will

Refineries

There are continuous spills and permanent maintenance at a refinery where oil is found in huge quantities. One pound of O.W.L. will absorb up to a gallon of oil.
An easy, environmentally safe, and cheap way to clean up.

Harbors And Marinas

Responsible marinas don't want to see fuel spills in the water. It is harmful to the environment, it does not look or smell good, and it can also be dangerous.
O.W.L. works at its best on water.

Paint Manufacturers

Paint spills can happen at any stage within the premises of a paint factory. It is just amazing what O.W.L will do with paint and it hardly leaches at all.

Advantages Of O.W.L.

With O.W.L. you will use less, absorb more, dispose of less, save labour and reduce the overall cost of clean-up.

- Passes the Paint Filter Liquids Test (Method 9095), which measures the presence or absence of a free-liquid.
- Used properly, O.W.L. does not leach - once the liquid is absorbed it is retained.
- Leaves only 2% ash residue when incinerated.
- Has low abrasion with a hardness factor of less than 1.0 on the Morh's Hardness Scale.
- Is lightweight and easy to use for cleanup & disposal.
- Is classified as a non-biodegradable absorbent, will not decompose and leave the liquic originally absorbed (O.W.L. passes both the ASTM G22-76 & ASTM G21-90).
- Is hydrophobic and will not absorb water for weeks.
- Will clean up most oil and petroleum-based liquids and chemicals.
- Reduces waste volume by up to 80% compared to clay products.
- Meets and exceeds EPA, OSHA and ANSI guidelines for sorbent material performance.
- Enhances and catalyzes biodegrading of absorbed hydrocarbons.
- Reduces explosive vapors up to 90% when applied to gasoline or a flammable liquid, converting a volatile condition into a manageable situation.
- Contains no silica (hardness factor of 7.0) which is harder than steel (hardness factor of 6.0). Silica particles are known carcinogens and are contained in clay products.
- Produces over 17,000 BTU's per pound of incineration value (tested with light crude).

How To Use O.W.L.

Land

Spread sufficient O.W.L. on the spill and rake the aggregate until all of the oil has been absorbed. In windy conditions, spread upwind and move across the spill downwind. So as to avoid dispersion of the absorbent, pour O.W.L. from a height of about 15 cm. Gather the oil-satured O.W.L. absorbent by sweeping, raking, shoveling or bulldozing the mix, and safely load or containerize the mix suitably for transportation to the disposal site.

Water

O.W.L. absorbent is hydrophobic and will float for days absorbing spills. Spread manually or mechanically from the upwind side of the spill. On flowing water spread upstream of pre-positioned and floating absorbent booms so as to absorb the trapped oil. Use screened forks or suction devices to remove the oil-saturated O.W.L. absorbent.

With Containers

To safely transport used oil in hydrocarbon drums, mix the O.W.L. absorbent with the oil until solidified; then seal the drums closed. Also use O.W.L. absorbent as a safety precaution by spreading around and over containers that may overflow seep or leak while in transit. storage

O.W.L. Can Absorb

HYDROCARBONS

Bunker fuels
Crude oils
Gasoline / Diesel
Heptane
Jet fuels
Kerosene
Motor oil
Paraffins / Alkanes
Petrol
Styrene

SOLVENTS

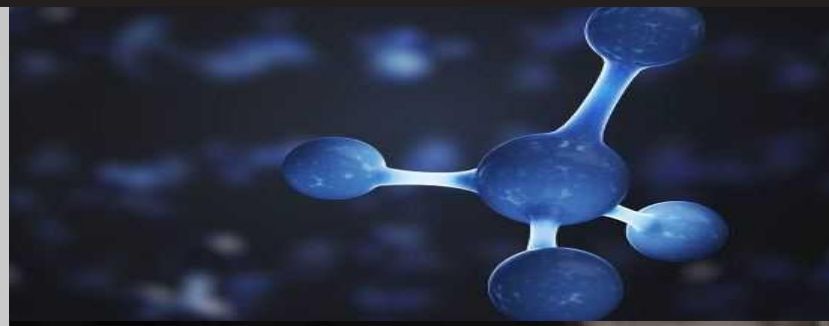
Acetone
Benzene / Benzoil
Bromoform Chloroform
Cyclohexane
Hexane
Ketones
Naphta
Toluene
Varsol
Xylenes

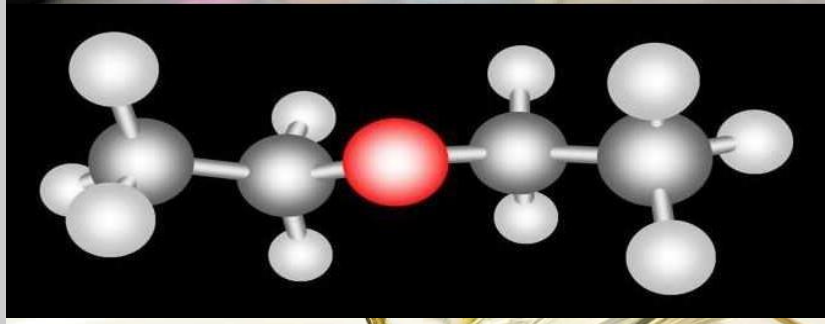
ALCOHOLS AND ETHERS

Butyl Alcohol /Butanol
Ethyl Alcohol / Ethanol
Glycols
Isobutyl Alcohol / Isobutanol
Isopropyl Alcool / Propanol
Isopropyl-alcohol / Isopropanol
Methyl Alcohol / Methanol
Phenyl Alcool / Phenol

MISCELLANEOUS

Acetonitrile
Acrolein
Animal Fats
Blood
Carbon disulphide
Cutting oils
Dyes Heavy metals Herbicides
Inks (oil based)
Isoprene
Naphthalene Oil based paints Silicone oil
Vegetable oil





Average weight of liquid sorbed per pound of O.W.L.

Acetone 7.19 lbs./lb.
Denatured Alcohol 8.46 lbs./lb.
Diesel Fuel 7.48 lbs./lb.
Gasoline 5.20 lbs./lb.
Gear Oil (80W90) 9.39 lbs./lb.
Hydraulic Oil 9.74 lbs./lb.
Kerosene 5.86 lbs./lb.
Light Crude 6.93 lbs./lb.
Methyl Ethyl Ketone 7.38 lbs./lb.
Mineral Spirits 7.20 lbs./lb.
Naphtha 6.81 lbs./lb.
Turpentine 8.30 lbs./lb.
Xylene 7.95 lbs./lb.

Overview Of The Absorbent Market

The market for sorbents is presently comprised of many different manufacturers and many different types of products. The market is very segmented, with a lot of small, under-capitalized producers. The market is presently consolidating into a smaller range of effective products and larger companies with the capital to educate the public and market new absorbents.

There are three forms or categories for sorbents:

Synthetic

Inorganic

Organic

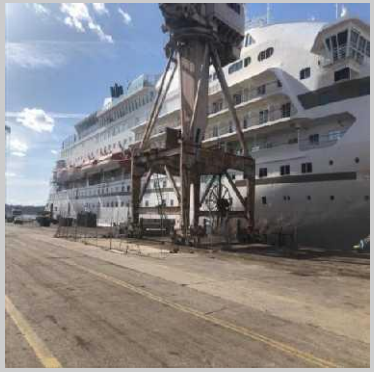
Synthetic sorbents include polypropylene and other man-made materials. This technology has been around for about 15 years. Synthetics have gained 25% of the overall sorbent market. Polypropylene will leach sorbed petrochemicals and hydrocarbons.

Inorganic sorbents include clay, zeolites and diatomaceous earth. These adsorbents dominate 60% of the market. The inorganic sorbents have been used longer than any other sorbent and require little education to use. They are losing market share due to high cost of disposal, inefficiencies in their use, and health issues.

Organic sorbents include cellulose, paper, and peat moss. The organic sorbents have approximately 15% market share, but are the fastest growing segment of the market. Organic sorbents, through market awareness, education, and tougher environmental laws and regulations will eventually take over the market share of inorganic sorbents. The organic sorbents are less expensive to use and can be disposed of more efficiently.

Activities

Ship bilge cleaning from oil leakage with 100% absorption in a few seconds



Cleaning of a public road with fibre from spillage of material dangerous to the environment, people and animals. The clean-up was carried out in a very short time with 100% success and a great saving of time for the workers and with safety.

Cleaning of old stains on the ground with O.W.L. Oil Cleaner

Step 1: Spray

Step 2: Scrub

Step 3: Rinse with water

FIBER PREMIUM MULTI PURPOSE ABSORBENT

Aluminioum Bag

CODE	VOLUME
F0002001	2 Lit
F0005001	5 Lit
F0008001	8 Lit
F0065001	65 Lit

100% Natural Biodegradable, Oleophilic, Hydrophobic, Non-abrasive Non-toxic, Easy disposal, High energy value Absorbs oils, petrol, chemicals, paints, and much more...

Sack

CODE	VOLUME
F0030001	30 Lit
F0050001	50 Lit

100% Natural Biodegradable, Oleophilic, Hydrophobic, Non-abrasive Non-toxic, Easy disposal, High energy value Absorbs oils, petrol, chemicals, paints, and much more...

Bucket

CODE	VOLUME
F0010001	10 Lit
F0025001	25 Lit

100% Natural Biodegradable, Oleophilic, Hydrophobic, Non-abrasive Non-toxic, Easy disposal, High energy value Absorbs oils, petrol, chemicals, paints, and much more...

Pallet Bag

CODE	VOLUME
F3025001	3,025 Lit

100% Natural Biodegradable, Oleophilic, Hydrophobic, Non-abrasive Non-toxic, Easy disposal, High energy value Absorbs oils, petrol, chemicals, paints, and much more...

EMERGENCY KIT

CODE	VOLUME
EK001003	6 Lit

Mini

INCLUDES

- Fiber 2 litter
- Square 1 piece 30X30
- Eco cleaner 1 sprey 1 litter
- Oil pads 40x50 - 20 pieces
- One-use gloves 5 set

Normal

CODE	VOLUME
EK002003	15 Lit

INCLUDES

- Fiber 5 litter
- Eco cleaner 1 spreu 1 liiter
- Oil pads 40X50- 50 pieces
- ABSORBENT PIPE WITH FIBER 1500x0.20
- Square 2 piece 30X30
- One-use gloves 5 set
- ANTI-FRICTION SHOVEL MINI

Big

INCLUDES

- Eco cleaner 1 spreu 5 liiter
- Oil pads 40X50- 100 pieces
- ABSORBENT PIPE WITH FIBER 1500x0.20
- Protection Barriers 3m x0.13
- One-use gloves 20 set
- ANTI-FRICTION SHOVEL small
- Square 2 piece 45x45
- Fiber 25 Lit

CODE	VOLUME
EK003003	120 Lit

OIL CLEANER

Eco

OC00	1 Lit
OC0	10 Lit
	Li
OCS0	1 Lit Sprey
	2 Lit Sprey
OCS05002	5 Lit Sprey
OCS08002	8 Lit Sprey

Euro X

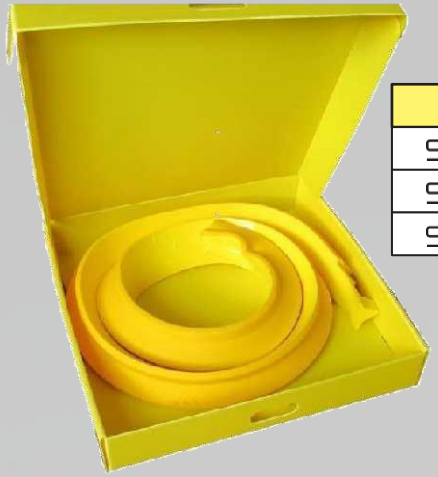
OC00	1 Lit
OC0	10 Lit
	Li
OCS0	1 Lit Sprey
	2 Lit Sprey
OCS05002	5 Lit Sprey
OCS08002	8 Lit Sprey

Euro

CODE	VOLUME
OC001002	1 Lit
OC010002	10 Lit
OC020002	20 Lit
OCS01002	1 Lit Sprey
OCS02002	2 Lit Sprey
OCS05002	5 Lit Sprey
OCS08002	8 Lit Sprey

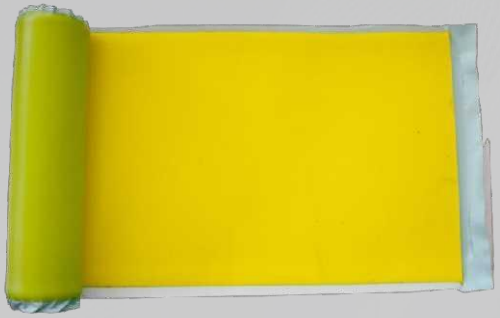
GROUND BARRIER

Spill Floor



CODE	DIMENSIONS	WEIGHT
SF001006	2000x70x50	4 ,0 Kgr
SF002006	3000x100x100	12,0 Kgr
SF003006	450x45	1,7 Kgr

Sealing Horizontal Well



CODE	DIMENSIONS	WEIGHT
SHW01007	1600x450x8	6,4 Kgr

Well Sealand

CODE	DIMENSIONS	WEIGHT
WS001007	500x500x8	2 ,2 Kgr
WS002007	600x600	3,2 Kgr
WS003007	700x700	4,3 Kgr

ABSORBENT CUSHION WITH FIBER

Square

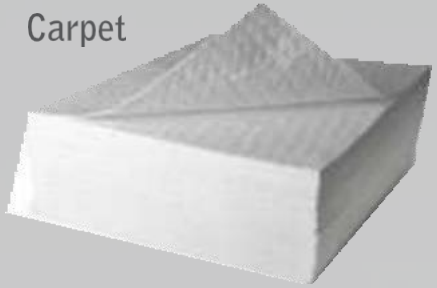
CODE	DIMENSIONS	WEIGHT
AC001008	20x25	0,20
AC002008	30x30	0,65
AC003008	30x40	0,85
AC004008	45x45	1,50
AC005008	50x60	7,00
AC006008	40x80	2,50

Absorbent Pipe with Fiber

CODE	DIMENSIONS	WEIGHT
AP001009	1.500x0.15	1,30
AP002009	1.500x0.20	2,60
AP003009	1.000x0.15	1,15
AP004009	2.000x0.15	3,60
AP005009	2.000x0.20	4,85
AP006009	3.000x0.20	7,00
AP007009	1.500x0.12	1,50

POLY- OIL ABSORBENT

Carpet



CODE	DIMENSIONS	ITEMS	WEIGHT
PA001011	40x50	100	4 Kgr
PA002011	40x50	200	8 Kgr

Sweep Rolls

CODE	DIMENSIONS	ITEMS	WEIGHT
PA005011	44x0.78m	1	8,5 Kgr

Carpet Rolls

CODE	DIMENSIONS	ITEMS	WEIGHT
PA003011	44x0.5m	1	5 Kgr
PA004011	44x1.0m	2	10 Kgr

Protection Barriers

CODE	DIMENSIONS	ITEMS	WEIGHT
PA006011	3m x 0.13	1	10

Protection Barriers X

CODE	DIMENSIONS	ITEMS	WEIGHT
PA007011	3m x 20,0cm	1	20,0 Kgr
PA008011	1.2m x 7.5cm	1	4,5 Kgr
PA009011	3m x10,0cm	1	4,5 Kgr

PRODUCTION TOOLS

Anti-Friction Shovel Mini

CODE
PT001010

Anti-Friction Shovel Small

CODE
PT002010

Anti-Friction Shovel Big

CODE
PT003010

Presentation Case

CODE
PT004010

Distribution Cart

CODE
PT005010

PROJECT O.W.L

TECHNO-ECONOMIC STUDY FOR THE USE OF PLANT FIBER (O.W.L) IN A REFINERY TO CLEAN HYDROCARBON CONTAMINATED WATERS

• Is a private study with an experimental procedure provided by kpmg sa

• As a reference , in 1991 the chemical engineering department, college of engineering king saud university, saudi arabia, published a study from dr m.i. al - ahmad and i.s. al-mutaz.
This study is even up to day the most comprehensive study ever carried out in ksa.

• The study is titled {techno-economic study of cleaning waste contaminated oils in the arabian gulf countries }

• The cost of construction as well as maintenance of the system as described in the specific study is based on the tables below.

• Total cost per years. The cost is normally given by the addition of the total operating cost, depreciation, interest on working capital and interest on the depreciable capital.
The operating costs consist of two major components; variable operating costs and fixed operating costs.
The variable operating costs include the following:
in europe the cost is slightly less at 650 u.s $ per ton as per below cleaning process.

• Effluent treatment plant

• The effluent from the intermediate treatment processes, together with the effluent originating directly from the other refinery units, are sent for treatment in the effluent treatment plant via a separate oily water sewer (ows) system.

• liquid effluent drained from storage tanks is intermittently fed via enclosed drains to the refinery sewer system for treatment in the effluent treatment plant.
During the drainage process the quality of effluents is visually inspected.

Deballasting of tanker vessels is achieved via the ballast pipelines into ballast tanks, where the oily phase is separated from the aqueous phase by virtue of their different specific gravities.
After a specific settlement time, the aqueous phase is sent to the effluent treatment plant, via closed pipelines, while the oily phase is fed to the crude oil tanks for re-distillation.

• Waste water is treated in the following stages:

• Three oil separators (api-3, api-4, api-5), and two tanks (t-2000 and t-2001), are used for the treatment of rain and ballast water.
The operation is straightforward and is therefore not explained in detail or shown in the schematic diagram.

• In separators api-1 and api-2, the oil is removed by mechanical disc-type separators (discoil), while the sludge at the bottom is removed using chain-scrapers and sludge pumps.
The recovered oil is fed into the refinery's oil recycling system (slops), while the sludge is sent to the dehydration unit.

• The waste leaving api-2, is sent to a dissolved air flotation unit (daf-1). Chemicals are added prior to flotation to achieve flocculation of hydrocarbons, while the separated oil that floats on the surface is collected and fed into the refinery's oil recovery system (slops).
The treated water is then pumped to the sand filters for further hydrocarbon content reduction.

• Following the sand filters, waste water undergoes a biological treatment process that utilises four biofor type biofilters. Before the biofiltration stage, waste water is mixed, in a balancing tank, with a recirculation stream from the biofilters exit. This allows for the pollutant content to be controlled (reduced), and for the efficiency and life expectancy of the biological treatment unit to be maximised.
In the biofilters, the organic load of waste water is biologically degraded by microorganisms that develop in the media bed of the biofilter.
Oxygen is introduced into the system by the addition of compressed air.

Chemical			**315.000**	**U.S.$**
Utilities			330.000	U.S.$
Raw material			1.950.000	U.S.$
Total variable operating costs			2.595.000	U.S.$
While the fixed operating costs are:				
Labour			1.740.000	U.S.$
Maintenance, 3% FC			1.242.000	U.S.$
Insurance, 1% FC			414.000	U.S.$
Overhead			2.982.000	U.S.$
Total fixed operating cost			8.559.000	U.S.$
So the production cost is then found as follows: Total operating cost			11.154.000	U.S.$
Depreciation			5.400.000	U.S.$
Interest on working capital			360.000	U.S.$
Interest on depreciable capital			3.150.000	U.S.$
Total production cost			14.304.000	U.S.$

The total cost per ton of leaning waste contaminated oils per ton is thus 714 U.S.$

• Following biofiltration, the treated effluents are discharged to the sea.
A certain amount of treated effluent is stored in a tank, to be used for washout and cleaning of the biofilters (with compressed air).

• The biofilters' washout water is stored in a separate storage basin, and is treated in the dissolved air flotation unit daf-2.
The main purpose of this air flotation is the removal of the suspended solids in sludge form. The treated effluent water from daf-2 joins the exit stream from daf-1 to the sand filters, being recirculated in the treatment process.

• Sludge produced at various stages of the waste water treatment process (mainly from daf-2, api-1/2, and a small amount separated in daf-1) is stored in a separate tank, from which is pumped in a centrifuge for dehydration.

PANEL B2. 7.2.1.2 Treated effluent characteristics		
parameter	limit refinery	limit Greek legislation
temperature (C)	30	35
ph	6.5 - 8.5	6.0 - 9.0
COD (mg/l)	100	150
BOD (mg/l)	30	40
sulphides of S" (mg/l)	1	2
lubricant oils (mg/l)	5	10
TSS (mg/l)	30	40
Ammonia of NH (mg/l)	15	15
Nitrous oxide of N-NO	-	20
phenoles (mg/l)	0.5	0.5
cyanide (mg / l)	-	0.5

Atoms
WATER CONTAINING HYDROCARBONS FROM 6%-20%

Chemical Testing
LABORATORY CONDITIONS USING OWL OVER 100 EXPERIMENTS SO FAR

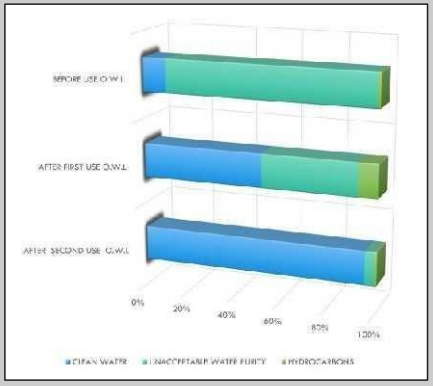
Formulas
VEGETABLE FIBER (O.W.L.)

EXPERIMENTAL PROCEDURE

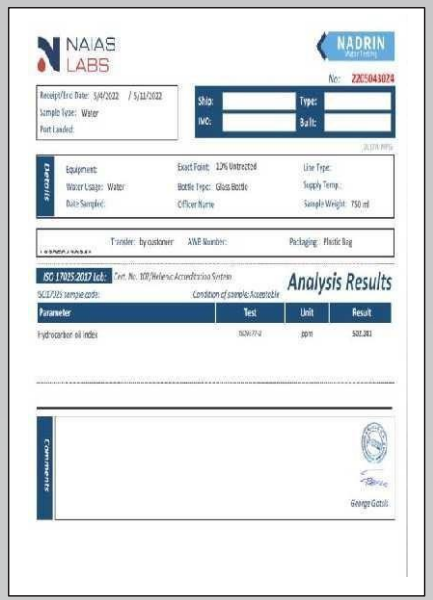
• The experimental procedure involving the cleaning of dirty hydrocarbon liquids Using vegetable fiber (O.W.L)

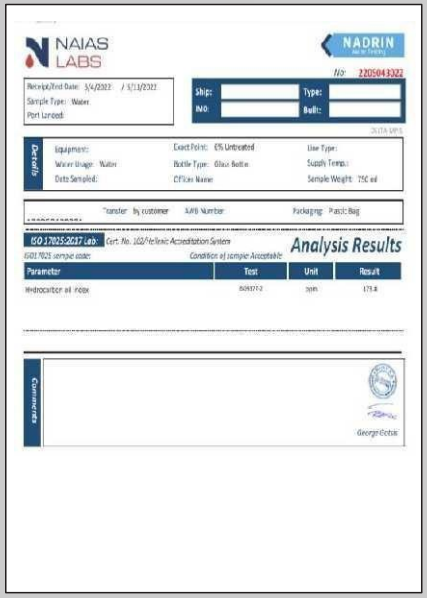
• Experimental conditions (crude liquids with a hydrocarbon content from 6% to 20% by voltage)

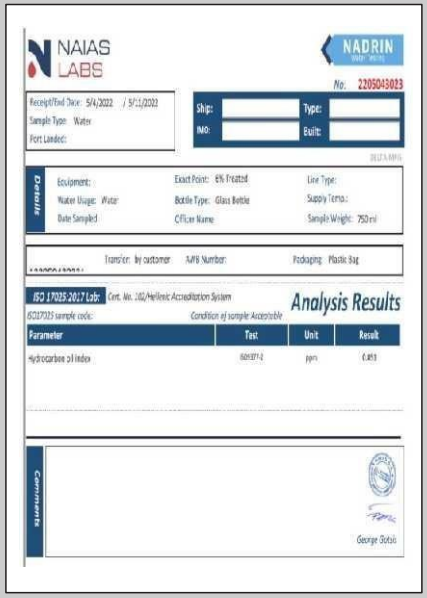
• Acceptable liquid cleaning results after using vegetable fiber. (O.W.L)

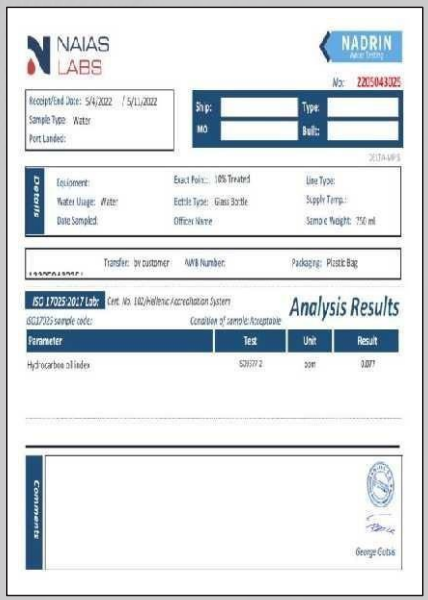


OFFICIAL MEASUREMENT BY A CERTIFIED CONTROL LABORATORY









ANSWER - QUESTIONS

1. In what range do you expect the operating cost to be if a viable solution using o.w.l can be achieved?

If the hydrocarbon content in the crude is at 20% , then the cost goes up to 250 $ per ton. as the quantity percent of hydrocarbons decreases hen the cost decreases as well.

2. What would be the lifetime of o.w.l, or full saturating time of the filter for straight run stream of waste water?

Absorption parameters factor is 4,68 (kg/o.w.l vs l/oil).

3. Would you please elaborate on the environmental concerns, if any, of dumping saturated O.W.L filters?
Any room for recycling?

O.W.L does not leach the hydrocarbon back into the environment, so it can safely be buried in landfillaccording to your local regulations.

Soil and groundwater will not be contaminated by the hydrocarbon. O.W.L. locks liquids into its hollow fibers allowing it to pass epa paint filter test method 9095 and tclp leachate standards required for landfill disposal. o.w.l is a certified vegetable product according to its collection product in case of pure hydrocarbons convert into biomass and can be combusted providing high thermal power which a refinery needs for the production of steam.

4. What about O.W.L. is ability to absorb heavy metals? What about salts that fully dissolve in water?

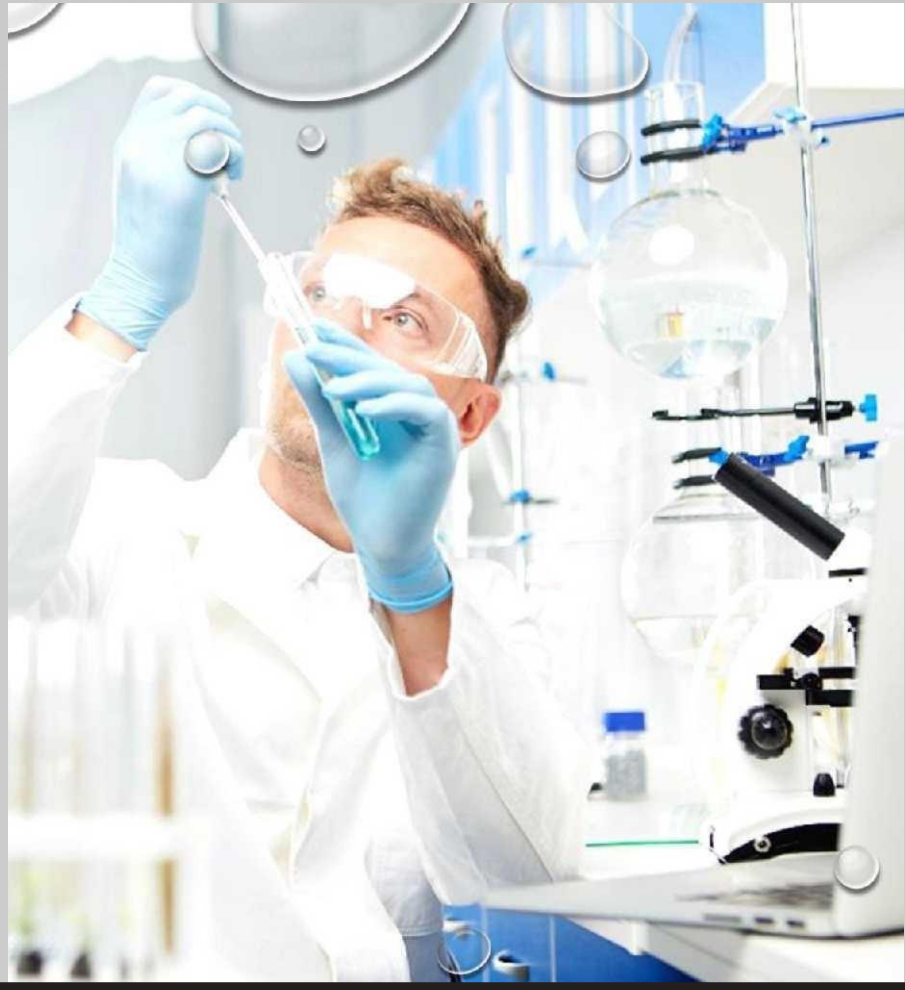
kindly check attached technical data sheet as regards heavy metals absorption.

As regards salinity, sorb®xt doesn't absorb the salt.

To this end , appropriate filters ought to be used to descalate the water.

5. What kind of O.W.L. filter will be used in the ponds? Is it fiber products, oil barrier or O.W,L. pipes ?

Ad hoc filters need to be manufactured with vegetable fiber within so that your water cleaning indexes are met.



FINAL CHEMISTRY OPINION

ANDREOY K. PC
CHEMICAL LABORATORIES

February 19 2024
Page **1** from **5**

To the company: TROIA SHIPPING LTD.

Topic: "Evaluation of absorbent material for the neutralization of marine oil pollution »

Relevant Legislation: No. 1218.91/97
Relevant Gazette: 951/B/23.10.1997, PAGE 12031-12032
Material : **O.W.L. Absorbent cleaning**

1.**Conditions under the Legislation**

2.α.

3.Oil recovery capacity

- In the material's user manual, a clear list of the chemicals that can be adsorbed by the absorbent material in question is written by the commercial company that sells the product. This for includes:
- • All categories of petroleum products, from gasoline to motor oils.
- • Common solvents of all polarity classes, from non-polar, such as hexane, to polar solvents completely soluble in water, such as alcohol.
  • For all of the above, clear results of the proportions of the pollutant and the absorbent material are given from studies by the manufacturer listed in the following bilingual table:
  Acetone 7.19 kgs./kg. Denatured Alcohol 8.46 kgs./ kg.
  Diesel Fuel 7.48 kgs./ kg. Gasoline 5.20 kgs./ kg.
  Gear Oil (80W90) 9.39 kgs./ kg. Hydraulic Oil kgs./ kg.
  Kerosene kgs./ kg.

ANDREOY K. PC
CHEMICAL LABORATORIES

February 19 2024
Page **2** from **5**

Light Crude 6.93 kgs./ kg.. Linseed Oil (Boiled) 7.70 kgs./ kg.
Methyl Ethyl Ketone (MEK) 7.38 kgs./ kg. Mineral Spirits 7.20 kgs./ kg.
Naphtha 6.81 kgs./ kg. Turpentine 8.30 kgs./ kg.
Xylene 7.95 kgs./ kg.

1.b. Hydrophobic
The absorbent material is declared as hydrophobic by the commercial house of the product, both in its user manual and in the Safety Data Sheet.
Our laboratory performed a washability test, which proves that the material is hydrophobic (described in paragraph 1.f.)

1.c Flammability
The material consists exclusively of plant materials and specifically of peat moss, which according to the material's Safety Data Sheet has no ignition point (not applicable), while the auto-ignition point of the material is declared at 200°C.
Our laboratory performed the autoignition temperature test (ASTM E659) and the test result was 205°C. Both, i.e. declared and the measurement result are expected for the type of product.
In conclusion, said absorbent material is not flammable.

1.d. Toxicity – Corrosivity

Our laboratory, at the customer's request, carried out an extensive detection of toxic substances in the absorbent material sample. Specifically, the existence was checked:

A. Polyfluorinated compounds (PFOS, PFOA).

B. Residues of plant protection substances.

C. Anionic and cationic detergents.

ANDREOY K. PC
CHEMICAL LABORATORIES

February 19 2024
Page **3** from **5**

D. Glycolics.

E. Acid esters.

F. Sodium phosphate.

- The results of extensive toxicity analyzes showed that the sample contained:
- 1.7mg/kg anionic detergents (toxicity limit >1,000mg/kg)
- 8.5 mg/kg propylene glycol (toxicity limit >1,000mg/kg)

And 220mg/kg sodium phosphate (toxicity limit >10,000mg/kg)

The concentrations of the substances identified are very low, clearly below the limits and cannot give the material toxic properties. **In conclusion, the material does not contain toxic substances and is not toxic.**
The sample shows a pH in solubility with deionized water 1:1 equal to 3.7. The effect of pH is acidic, but not corrosive, as materials with a pH<2.0 are defined as corrosive. It is pointed out that a large part of plant-derived materials have a similar pH to the product in question (eg: pears pH=3.8)
.In conclusion, the material is not corrosive.

1.e. Low ash
2.

- Our laboratory carried out the determination of ash (gravimetric @550oC), the result of which was 3.72%w/w.
- Although the legislation does not set a specific upper limit for ash, indicatively we quote ash results from plant samples analyzed by our laboratory:
- High compression pellets from conifers0/ash=1.06%w/w
- Wood chips olive ash=3.1%w/w
- Eucalyptus: barks and branches0/ash=4.93%w/w
- Eucalyptus: tree trunk0/ash=2.18%w/w
  Compost material0/ash=2.2-6.9%w/w

ANDREOY K. PC
CHEMICAL LABORATORIES

February 19 2024
Page **4** from **5**

The material in question presents a low ash, comparable to materials of similar origin.

In conclusion, the low ash criterion is met.

1.f. Buoyancy in water

Our laboratory carried out the test of buoyancy in water, which lasted 5 days (related photos are attached). Said absorbent material floats in water, does not get wet and continues to have these properties for at least 5 days.
The apparent density of the material is 0.1795kg/l. The water temperature at which the test was done was 20±1oC.

In conclusion, said absorbent material is not wetted by water and floats in it for a long period of time (at least 5 days).

ANDREOY K. PC
CHEMICAL LABORATORIES

February 19 2024
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1.g. Moisture resistance – long term storage

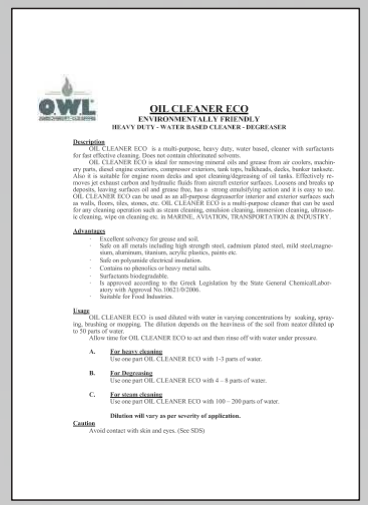
The material's resistance to moisture and water in general is demonstrated by the buoyancy test described in the previous paragraph.
In direct contact with water, the material remains inert for at least 5 days. In conclusion, the statement of the commercial house selling the product about the hydrophobic nature of the material is true. Hydrophobic materials are not affected by water or humidity.
The trading house from studies it has carried out states that the storage of the material is 5 years for the intended use.
. In conclusion, the material has sufficient shelf life.

FINAL CONCLUSION

The material in question (O.W.L. Absorbent Cleaning) covers all the specifications and properties of absorbents intended to be used in cases of marine oil pollution, as defined by Article I of No. 1218.91/97.

STEL. K. ANDREOY
CHEMICAL MSc
Yours
sincerely Stefanos
Andreou

OIL CLEANER ECO ENGLISH



OIL CLEANER ECO
ENVIRONMENTALLY FRIENDLY
HEAVY DUTY - WATER BASED CLEANER - DEGREASER

Description

OIL CLEANER ECO is a multi-purpose, heavy duty, water based, cleaner with surfactants for fast effective cleaning. Does not contain chlorinated solvents.

OIL CLEANER ECO is ideal for removing mineral oils and grease from air coolers, machinery parts, diesel engine exteriors, compressor exteriors, tank tops, bulkheads, decks, bunker tanks etc. Also it is suitable for engine room decks and spot cleaning/degreasing of oil tanks. Effectively removes jet exhaust carbon and hydraulic fluids from aircraft exterior surfaces. Loosens and breaks up deposits, leaving surfaces oil and grease free, has a strong emulsifying action and it is easy to use. OIL CLEANER ECO can be used as an all-purpose degreaserfor interior and exterior surfaces such as walls, floors, tiles, stones, etc. OIL CLEANER ECO is a multi-purpose cleaner that can be used for any cleaning operation such as steam cleaning, emulsion cleaning, immersion cleaning, ultrasonic cleaning, wipe on cleaning etc. in MARINE, AVIATION, TRANSPORTATION & INDUSTRY.

Advantages

- Excellent solvency for grease and soil.
- Safe on all metals including high strength steel, cadmium plated steel, mild steel,magnesium, aluminium, titanium, acrylic plastics, paints etc.
- Safe on polyamide electrical insulation.
- Contains no phenolics or heavy metal salts.
- Surfactants biodegradable.
- Is approved according to the Greek Legislation by the State General Chemicall,Laboratory with Approval No.10631/0/2006.
- Suitable for Food Industries.

Usage

OIL CLEANER ECO is used diluted with water in varying concentrations by soaking, spraying, brushing or mopping. The dilution depends on the heaviness of the soil from neator diluted up to 50 parts of water.

Allow time for OIL CLEANER ECO to act and then rinse off with water under pressure.

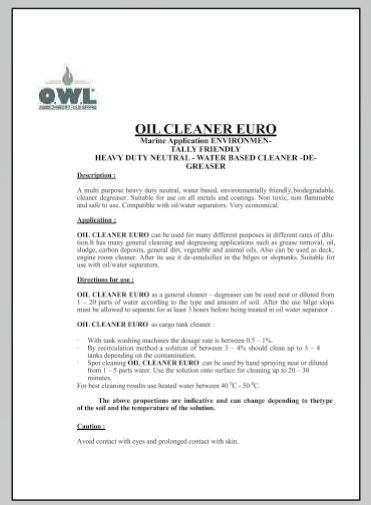
A. **For heavy cleaning**
Use one part OIL CLEANER ECO with 1-3 parts of water.

B. **For Degreasing**
Use one part OIL CLEANER ECO with 4 - 8 parts of water.

C. **For steam cleaning**
Use one part OIL CLEANER ECO with 100 – 200 parts of water.

Dilution will vary as per severity of application.

Caution
Avoid contact with skin and eyes. (See SDS)



OIL CLEANER EURO
Marine Application ENVIRONMEN-
TALLY FRIENDLY
HEAVY DUTY NEUTRAL - WATER BASED CLEANER -DE-GREASER

Description :

A multi purpose heavy duty neutral, water based, environmentally friendly,biodegradable, cleaner degreaser. Suitable for use on all metals and coatings. Non toxic, non flammable and safe to use. Compatible with oil/water separators. Very economical.

Application :

OIL CLEANER EURO can be used for many different purposes in different rates of dilution.It has many general cleaning and degreasing applications such as grease removal, oil, sludge, carbon deposits, general dirt, vegetable and animal oils. Also can be used in deck, engine room cleaner. After its use it de-emulsifies in the bilges or sloptanks. Suitable for use with oil/water separators.

Directions for use :

OIL CLEANER EURO as a general cleaner – degreaser can be used neat or diluted from 1 – 20 parts of water according to the type and amount of soil. After the use bilge slops must be allowed to separate for at least 3 hours before being treated in oil water separator .

OIL CLEANER EURO as cargo tank cleaner :

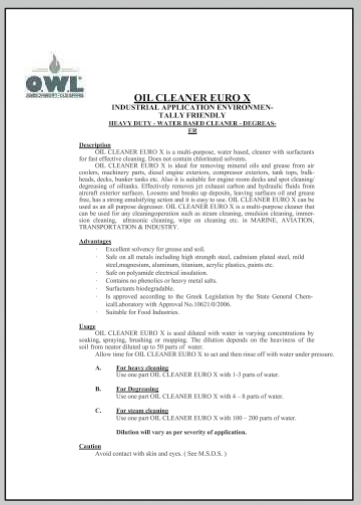
- With tank washing machines the dosage rate is between 0.5 – 1%.
- By recirculation method a solution of between 3 – 4% should clean up to 3 – 4 tanks depending on the contamination.
- Spot cleaning **OIL CLEANER EURO** can be used by hand spraying neat or diluted from 1 – 5 parts water. Use the solution onto surface for cleaning up to 20 – 30 minutes.

For best cleaning results use heated water between 40 °C - 50 °C.

The above proportions are indicative and can change depending to thetype of the soil and the temperature of the solution.

Caution :

Avoid contact with eyes and prolonged contact with skin.



OIL CLEANER EURO X
INDUSTRIAL APPLICATION ENVIRONMEN-
- TALLY FRIENDLY
HEAVY DUTY - WATER BASED CLEANER - DEGREAS-ER

Description

OIL CLEANER EURO X is a multi-purpose, water based, cleaner with surfactants for fast effective cleaning. Does not contain chlorinated solvents.

OIL CLEANER EURO X is ideal for removing mineral oils and grease from air coolers, machinery parts, diesel engine exteriors, compressor exteriors, tank tops, bulkheads, decks, bunker tanks etc. Also it is suitable for engine room decks and spot cleaning/ degreasing of oiltanks. Effectively removes jet exhaust carbon and hydraulic fluids from aircraft exterior surfaces. Loosens and breaks up deposits, leaving surfaces oil and grease free, has a strong emulsifying action and it is easy to use. OIL CLEANER EURO X can be used as an all purpose degreaser. OIL CLEANER EURO X is a multi-purpose cleaner that can be used for any cleaningoperation such as steam cleaning, emulsion cleaning, immersion cleaning, ultrasonic cleaning, wipe on cleaning etc. in MARINE, AVIATION, TRANSPORTATION & INDUSTRY.

Advantages

- Excellent solvency for grease and soil.
- Safe on all metals including high strength steel, cadmium plated steel, mild steel,magnesium, aluminium, titanium, acrylic plastics, paints etc.
- Safe on polyamide electrical insulation.
- Contains no phenolics or heavy metal salts.
- Surfactants biodegradable.
- Is approved according to the Greek Legislation by the State General Chemicall,aboratory with Approval No.10621/0/2006.
- Suitable for Food Industries.

Usage

OIL CLEANER EURO X is used diluted with water in varying concentrations by soaking, spraying, brushing or mopping. The dilution depends on the heaviness of the soil from neater diluted up to 50 parts of water.

Allow time for OIL CLEANER EURO X to act and then rinse off with water under pressure.

A. **For heavy cleaning**
Use one part OIL CLEANER EURO X with 1-3 parts of water.

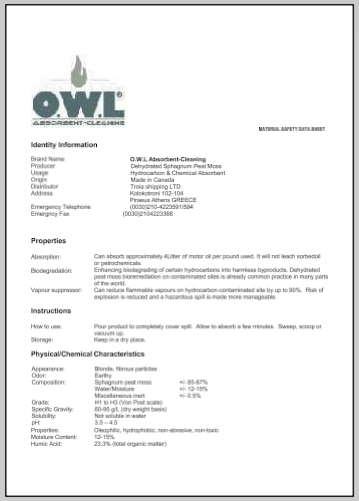
B. **For Degreasing**
Use one part OIL CLEANER EURO X with 4 - 8 parts of water.

C. **For steam cleaning**
Use one part OIL CLEANER EURO X with 100 – 200 parts of water.

Dilution will vary as per severity of application.

Caution
Avoid contact with skin and eyes. (See M.S.D.S.)

O.W.L MSDS



MATERIAL SAFETY DATA SHEET

Identity Information

Brand Name	**O.W.L Absorbent-Cleaning**
Producer	Dehydrated Sphagnum Peat Moss
Usage	Hydrocarbon & Chemical Absorbent
Origin	Made in Canada
Distributor	Troia shipping LTD
Address	Kolokotroni 102-104 Piraeus-Athens GREECE
Emergency Telephone	(0030)210-4222591/594
Emergency Fax	(0030)2104222388

Properties

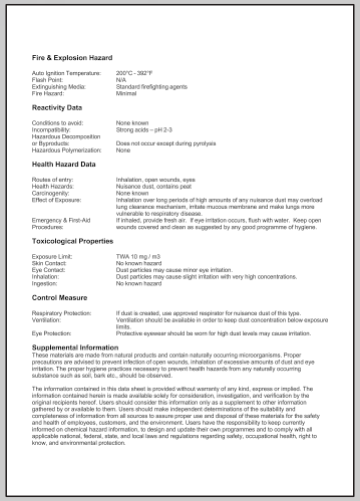
Absorption:	Can absorb approximately 4Litter of motor oil per pound used. It will not leach sorbedoil or petrochemicals.
Biodegradation:	Enhancing biodegrading of certain hydrocarbons into harmless byproducts. Dehydrated peat moss bioremediation on-contaminated sites is already common practice in many parts of the world.
Vapour suppressor:	Can reduce flammable vapours on hydrocarbon-contaminated site by up to 90%. Risk of explosion is reduced and a hazardous spill is made more manageable.

Instructions

How to use:	Pour product to completely cover spill. Allow to absorb a few minutes. Sweep, scoop or vacuum up.
Storage:	Keep in a dry place.

Physical/Chemical Characteristics

Appearance:	Blonde, fibrous particles	
Odor:	Earthy	
Composition:	Sphagnum peat moss	+/- 85-87%
	Water/Moisture	+/- 12-15%
	Miscellaneous inert	+/- 0.5%
Grade:	H1 to H3 (Von Post scale)	
Specific Gravity:	60-90 g/L (dry weight basis)	
Solubility:	Not soluble in water	
pH:	3.5 – 4.5	
Properties:	Oleophilic, hydrophobic, non-abrasive, non-toxic	
Moisture Content:	12-15%	
Humic Acid:	23.3% (total organic matter)	



Fire & Explosion Hazard

Auto Ignition Temperature:	200°C - 392°F
Flash Point:	N/A
Extinguishing Media:	Standard firefighting agents
Fire Hazard:	Minimal

Reactivity Data

Conditions to avoid:	None known
Incompatibility:	Strong acids – pH 2-3
Hazardous Decomposition or Byproducts:	Does not occur except during pyrolysis
Hazardous Polymerization:	None

Health Hazard Data

Routes of entry:	Inhalation, open wounds, eyes
Health Hazards:	Nuisance dust, contains peat
Carcinogenity:	None known
Effect of Exposure:	Inhalation over long periods of high amounts of any nuisance dust may overload lung clearance mechanism, irritate mucous membrane and make lungs more vulnerable to respiratory disease.
Emergency & First-Aid Procedures:	If inhaled, provide fresh air. If eye irritation occurs, flush with water. Keep open wounds covered and clean as suggested by any good programme of hygiene.

Toxicological Properties

Exposure Limit:	TWA 10 mg / m3
Skin Contact:	No known hazard
Eye Contact:	Dust particles may cause minor eye irritation.
Inhalation:	Dust particles may cause slight irritation with very high concentrations.
Ingestion:	No known hazard

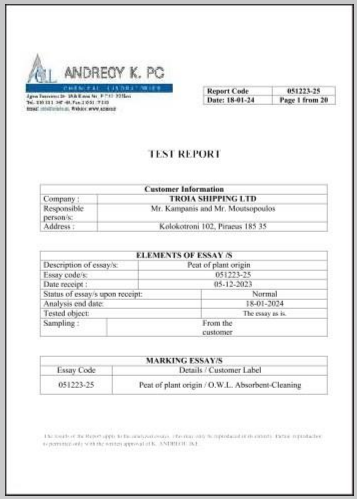
Control Measure

Respiratory Protection:	If dust is created, use approved respirator for nuisance dust of this type.
Ventilation:	Ventilation should be available in order to keep dust concentration below exposure limits.
Eye Protection:	Protective eyewear should be worn for high dust levels may cause irritation.

Supplemental Information

These materials are made from natural products and contain naturally occurring microorganisms. Proper precautions are advised to prevent infection of open wounds, inhalation of excessive amounts of dust and eye irritation. The proper hygiene practices necessary to prevent health hazards from any naturally occurring substance such as soil, bark etc., should be observed.

The information contained in this data sheet is provided without warranty of any kind, express or implied. The information contained herein is made available solely for consideration, investigation, and verification by the original recipients hereof. Users should consider this information only as a supplement to other information gathered by or available to them. Users should make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials for the safety and health of their employees, customers and the environment. Users have the responsibility to keep currently informed on chemical hazard information, to design and update their own programmes and to comply with all applicable national, federal, state, and local laws and regulations regarding safety, occupational health, right to know, and environmental protection.



ANDREOY K. PC

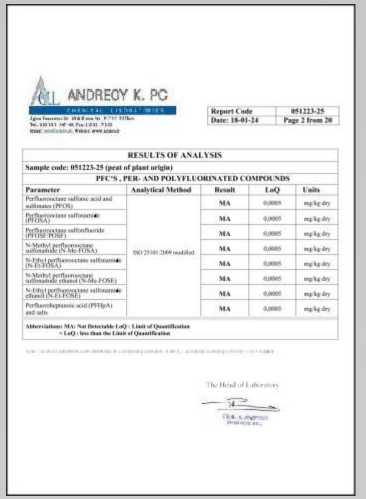
Report Code	051223-25
Date: 18-01-24	Page 1 from 20

TEST REPORT

Customer Information	
Company :	TROIA SHIPPING LTD
Responsible person/s:	Mr. Kampanis and Mr. Moutsopoulos
Address :	Kolokotroni 102, Piraeus 185 35

ELEMENTS OF ESSAY /S	
Description of essay/s:	Peat of plant origin
Essay code/s:	051223-25
Date receipt :	05-12-2023
Status of essay/s upon receipt:	Normal
Analysis end date:	18-01-2024
Tested object:	The essay as is.
Sampling :	From the customer

MARKING ESSAY/S	
Essay Code	Details / Customer Label
051223-25	Peat of plant origin / O.W.L. Absorbent-Cleaning



ANDREOY K. PC

Report Code	051223-25
Date: 18-01-24	Page 2 from 20

RESULTS OF ANALYSIS

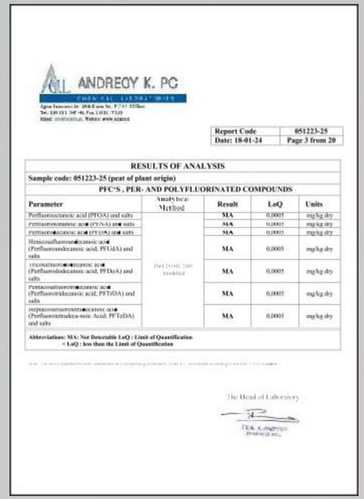
Sample code: 051223-25 (peat of plant origin)

PFC'S , PER- AND POLYFLUORINATED COMPOUNDS

Parameter	Analytical Method	Result	LoQ	Units
Perfluorooctane sulfonic acid and sulfonates (PFOS)	ISO 25101:2009 modified	MA	0,0005	mg/kg dry
Perfluorooctane sulfonamide (PFOSA)		MA	0,0005	mg/kg dry
Perfluorooctane sulfonfluoride (PFOSF/POSF)		MA	0,0005	mg/kg dry
N-Methyl perfluorooctane sulfonamide (N-Me-FOSA)		MA	0,0005	mg/kg dry
N-Ethyl perfluorooctane sulfonamide (N-Et-FOSA)		MA	0,0005	mg/kg dry
N-Methyl perfluorooctane sulfonamide ethanol (N-Me-FOSE)		MA	0,0005	mg/kg dry
N-Ethyl perfluorooctane sulfonamide ethanol (N-Et-FOSE)		MA	0,0005	mg/kg dry
Perfluoroheptanoic acid (PFHpA) and salts		MA	0,0005	mg/kg dry

Abbreviations: MA: Not Detectable LoQ : Limit of Quantification
< LoQ : less than the Limit of Quantification

The Head of Laboratory



ANDREOY K. PC

Report Code	051223-25
Date: 18-01-24	Page 3 from 20

RESULTS OF ANALYSIS

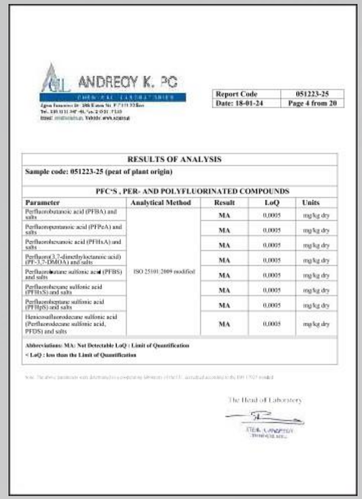
Sample code: 051223-25 (peat of plant origin)

PFC'S , PER- AND POLYFLUORINATED COMPOUNDS

Parameter	Analytical Method	Result	LoQ	Units
Perfluorooctanoic acid (PFOA) and salts	ISO 25101:2009 modified	MA	0,0005	mg/kg dry
Perfluorononanoic acid (PFNA) and salts		MA	0,0005	mg/kg dry
Perfluorodecanoic acid (PFDA) and salts		MA	0,0005	mg/kg dry
Henicosafluoroundecanoic acid (Perfluoroundecanoic acid; PFUdA) and salts		MA	0,0005	mg/kg dry
Tricosafluorododecanoic acid (Perfluorododecanoic acid; PFDoA) and salts		MA	0,0005	mg/kg dry
Pentacosafluorotridecanoic acid (Perfluorotridecanoic acid; PFTrDA) and salts		MA	0,0005	mg/kg dry
Heptacosafluorotetradecanoic acid (Perfluorotetradeca-noic Acid; PFTeDA) and salts		MA	0,0005	mg/kg dry

Abbreviations: MA: Not Detectable LoQ : Limit of Quantification
< LoQ : less than the Limit of Quantification

The Head of Laboratory



ANDREOY K. PC

Report Code	051223-25
Date: 18-01-24	Page 4 from 20

RESULTS OF ANALYSIS

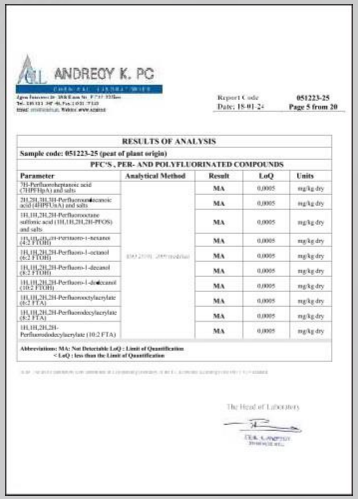
Sample code: 051223-25 (peat of plant origin)

PFC'S , PER- AND POLYFLUORINATED COMPOUNDS

Parameter	Analytical Method	Result	LoQ	Units
Perfluorobutanoic acid (PFBA) and salts	ISO 25101:2009 modified	MA	0,0005	mg/kg dry
Perfluoropentanoic acid (PFPeA) and salts		MA	0,0005	mg/kg dry
Perfluorohexanoic acid (PFHxA) and salts		MA	0,0005	mg/kg dry
Perfluoro(3,7-dimethyloctanoic acid) (PF-3,7-DMOA) and salts		MA	0,0005	mg/kg dry
Perfluorobutane sulfonic acid (PFBS) and salts		MA	0,0005	mg/kg dry
Perfluorohexane sulfonic acid (PFHxS) and salts		MA	0,0005	mg/kg dry
Perfluoroheptane sulfonic acid (PFHpS) and salts		MA	0,0005	mg/kg dry
Henicosafluorodecane sulfonic acid (Perfluorodecane sulfonic acid, PFDS) and salts		MA	0,0005	mg/kg dry

Abbreviations: MA: Not Detectable LoQ : Limit of Quantification
< LoQ : less than the Limit of Quantification

The Head of Laboratory



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RESULTS OF ANALYSIS

Sample code: 051223-25 (peat of plant origin)

PFC'S , PER- AND POLYFLUORINATED COMPOUNDS

Parameter	Analytical Method	Result	LoQ	Units
7H-Perfluoroheptanoic acid (7HPFHpA) and salts	ISO 25101:2009 modified	MA	0,0005	mg/kg dry
2H,2H,3H,3H-Perfluoroundecanoic acid (4HPFUnA) and salts		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluorooctane sulfonic acid (1H,1H,2H,2H-PFOS) and salts		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH)		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluorodecylacrylate (8:2 FTA)		MA	0,0005	mg/kg dry
1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)		MA	0,0005	mg/kg dry

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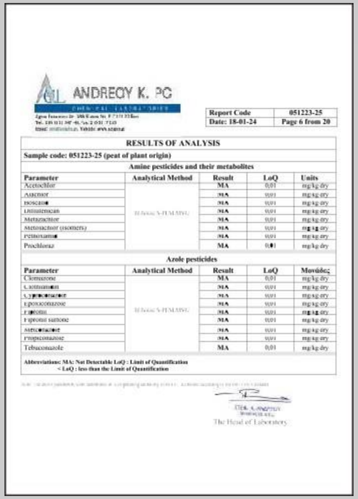

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RESULTS OF ANALYSIS

Sample code: 051223-25 (peat of plant origin)

Amine pesticides and their metabolites

Parameter	Analytical Method	Result	LoQ	Units
Acetochlor	In house S-PESLMS02	MA	0,01	mg/kg dry
Alachlor		MA	0,01	mg/kg dry
Boscalid		MA	0,01	mg/kg dry
Diflufenican		MA	0,01	mg/kg dry
Metazachlor		MA	0,01	mg/kg dry
Metolachlor (isomers)		MA	0,01	mg/kg dry
Pethoxamid		MA	0,01	mg/kg dry
Prochloraz		MA	0,01	mg/kg dry

Azole pesticides

Parameter	Analytical Method	Result	LoQ	Μονάδες
Clomazone	In house S-PESLMS02	MA	0,01	mg/kg dry
Clothianidin		MA	0,01	mg/kg dry
Cyproconazole		MA	0,01	mg/kg dry
Epoxiconazole		MA	0,01	mg/kg dry
Fipronil		MA	0,01	mg/kg dry
Fipronil sulfone		MA	0,01	mg/kg dry
Metconazole		MA	0,01	mg/kg dry
Propiconazole		MA	0,01	mg/kg dry
Tebuconazole		MA	0,01	mg/kg dry

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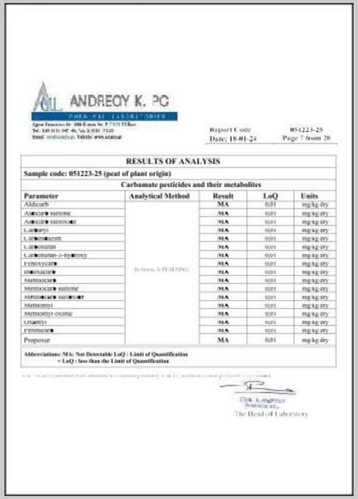

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RESULTS OF ANALYSIS

Sample code: 051223-25 (peat of plant origin)

Carbamate pesticides and their metabolites

Parameter	Analytical Method	Result	LoQ	Units
Aldicarb	In house S-PESLMS02	MA	0,01	mg/kg dry
Aldicarb sulfone		MA	0,01	mg/kg dry
Aldicarb sulfoxide		MA	0,01	mg/kg dry
Carbaryl		MA	0,01	mg/kg dry
Carbendazim		MA	0,01	mg/kg dry
Carbofuran		MA	0,01	mg/kg dry
Carbofuran-3-hydroxy		MA	0,01	mg/kg dry
Fenoxycarb		MA	0,01	mg/kg dry
Indoxacarb		MA	0,01	mg/kg dry
Methiocarb		MA	0,01	mg/kg dry
Methiocarb sulfone		MA	0,01	mg/kg dry
Methiocarb sulfoxide		MA	0,01	mg/kg dry
Methomyl		MA	0,01	mg/kg dry
Methomyl oxime		MA	0,01	mg/kg dry
Oxamyl		MA	0,01	mg/kg dry
Pirimicarb		MA	0,01	mg/kg dry
Propoxur		MA	0,01	mg/kg dry

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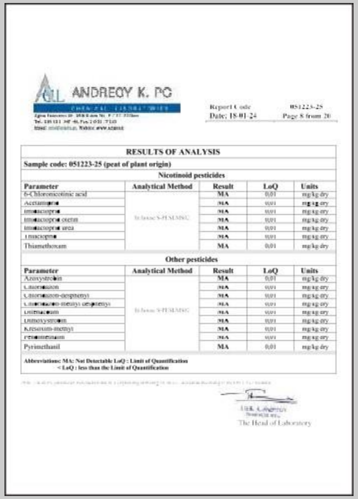
The Head of Laboratory



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RESULTS OF ANALYSIS

Sample code: 051223-25 (peat of plant origin)

Nicotinoid pesticides

Parameter	Analytical Method	Result	LoQ	Units
6-Chloronicotinic acid	In house S-PESLMS02	MA	0,01	mg/kg dry
Acetamiprid		MA	0,01	mg/kg dry
Imidacloprid		MA	0,01	mg/kg dry
Imidacloprid olefin		MA	0,01	mg/kg dry
Imidacloprid urea		MA	0,01	mg/kg dry
Thiacloprid		MA	0,01	mg/kg dry
Thiamethoxam		MA	0,01	mg/kg dry

Other pesticides

Parameter	Analytical Method	Result	LoQ	Units
Azoxystrobin	In house S-PESLMS02	MA	0,01	mg/kg dry
Chloridazon		MA	0,01	mg/kg dry
Chloridazon-desphenyl		MA	0,01	mg/kg dry
Chloridazon-methyl desphenyl		MA	0,01	mg/kg dry
Difenacoum		MA	0,01	mg/kg dry
Dimoxystrobin		MA	0,01	mg/kg dry
Kresoxim-methyl		MA	0,01	mg/kg dry
Pendimethalin		MA	0,01	mg/kg dry
Pyrimethanil		MA	0,01	mg/kg dry

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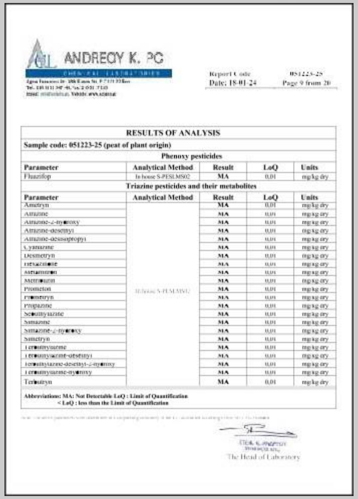

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RESULTS OF ANALYSIS

Sample code: 051223-25 (peat of plant origin)

Phenoxy pesticides

Parameter	Analytical Method	Result	LoQ	Units
Fluazifop	In house S-PESLMS02	MA	0,01	mg/kg dry

Triazine pesticides and their metabolites

Parameter	Analytical Method	Result	LoQ	Units
Ametryn	In house S-PESLMS02	MA	0,01	mg/kg dry
Atrazine		MA	0,01	mg/kg dry
Atrazine-2-hydroxy		MA	0,01	mg/kg dry
Atrazine-desethyl		MA	0,01	mg/kg dry
Atrazine-desisopropyl		MA	0,01	mg/kg dry
Cyanazine		MA	0,01	mg/kg dry
Desmetryn		MA	0,01	mg/kg dry
Hexazinone		MA	0,01	mg/kg dry
Metamitron		MA	0,01	mg/kg dry
Metribuzin		MA	0,01	mg/kg dry
Prometon		MA	0,01	mg/kg dry
Prometryn		MA	0,01	mg/kg dry
Propazine		MA	0,01	mg/kg dry
Sebuthylazine		MA	0,01	mg/kg dry
Simazine		MA	0,01	mg/kg dry
Simazine-2-hydroxy		MA	0,01	mg/kg dry
Simetryn		MA	0,01	mg/kg dry
Terbuthylazine		MA	0,01	mg/kg dry
Terbuthylazine-desethyl		MA	0,01	mg/kg dry
Terbuthylazine-desethyl-2-hydroxy		MA	0,01	mg/kg dry
Terbuthylazine-hydroxy		MA	0,01	mg/kg dry
Terbutryn		MA	0,01	mg/kg dry

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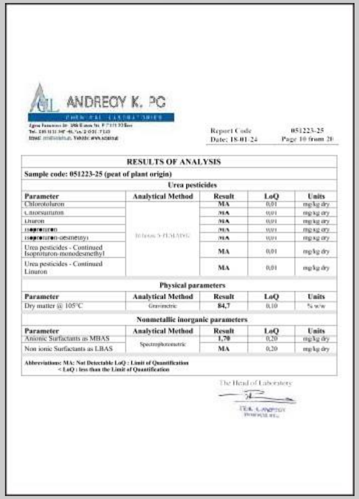
The Head of Laboratory



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RESULTS OF ANALYSIS

Sample code: 051223-25 (peat of plant origin)

Urea pesticides

Parameter	Analytical Method	Result	LoQ	Units
Chlorotoluron	In house S-PESLMS02	MA	0,01	mg/kg dry
Chlorsulfuron		MA	0,01	mg/kg dry
Diuron		MA	0,01	mg/kg dry
Isoproturon		MA	0,01	mg/kg dry
Isoproturon-desmethyl		MA	0,01	mg/kg dry
Urea pesticides - Continued Isoproturon-monodesmethyl		MA	0,01	mg/kg dry
Urea pesticides - Continued Linuron		MA	0,01	mg/kg dry

Physical parameters

Parameter	Analytical Method	Result	LoQ	Units
Dry matter @ 105°C	Gravimetric	84,7	0,10	% w/w

Nonmetallic inorganic parameters

Parameter	Analytical Method	Result	LoQ	Units
Anionic Surfactants as MBAS	Spectrophotometric	1,70	0,20	mg/kg dry
Non ionic Surfactants as LBAS		MA	0,20	mg/kg dry

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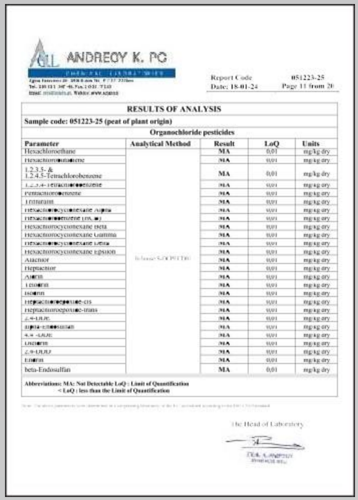
The Head of Laboratory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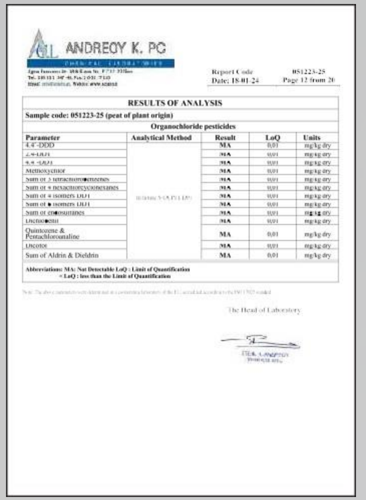
RESULTS OF ANALYSIS
Sample code: 051223-25 (peat of plant origin)
Organochloride pesticides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Sample code: 051223-25 (peat of plant origin)
Organochloride pesticides
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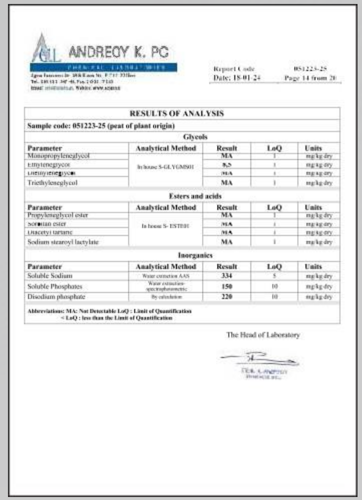
Organophosphorus pesticides
The Head of Laboratory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RESULTS OF ANALYSIS
Sample code: 051223-25 (peat of plant origin)
Glycols
Esters and acids
Inorganics
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SAMPLING DETAILS
PROCESSED SOLID MATERIALS
Sampling Method: EN 14899-2005
Sample code: 051223-25
04-12-2023 , 14:00 – 18:00
STEFANOS ANDREOU


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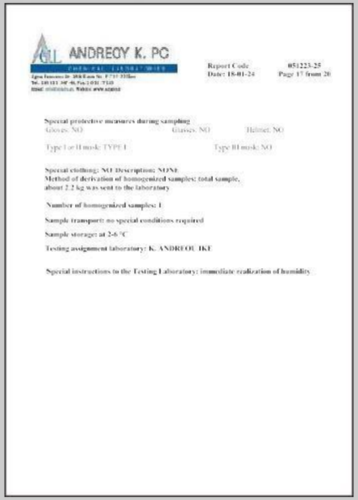
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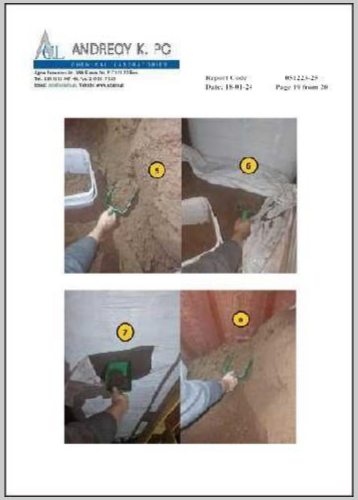
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OPINION
The Head of Laboratory

Premium Multi-Purpose Absorbent

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KV was created in 2020, with the primary purpose of promoting sales, distributing products and strengthening the marketing of businesses and entities, regardless of industry and sector.

We located the sales needs of sales market globally. We are ready to develop professional sales techniques and skills. Our stuff is a team of sales people who love to sell.

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