

Single page Conspectus of MobiRec

MOBIREC is mobile device to reprocess plastics and rubber – even mixed - into OIL and coal.
According to grade of mixture purity you will gain regular diesel, heavy oil, fuel oil, bunker
In all cases you can use it as a fuel. (Sell it as Heiz Öl).

Pyrolysis process can run once or continuously (Hi-efficient).

Heaters can recycle used oil from cars, trucks – 3x300 kW is enough energy to get allowance for ecological disposal of mineral and synthetic oil in EU(CH?). = Extra income.

Capacity of MOBIREC reactor is 6000Kg +/-, pyrolysis process took around 10 hours (single run).
Average consumption of oil is around 500 liters / run and it consume all the gases who are released during pyrolysis = Ecological.

If we load reactor by 6 ton of tires we will gain:

- > Fuel oil 2700 l +/- per cycle
- > Carbon black 1.8 t +/- per cycle
- > Steel wire 0.9t +/- per cycle

waste tire	Feedstock	Oil yield
Feelstock	PE	85%-95%
Truck tires	PP	80%-90%
Car tires	PS	80%-90%
Bicycle and motorcycle tires	ABS	40%
	PVC	N/A
	PET	N/A
	Pure white plastic	60%-70%
	Fishingnet, safety net	45%-50%
	Convenient bags	40%
	Plastictrademark	20%
	Paper mill scraps	20%-30%
	Household garbage	20%-50%
	Pure plastic cable	60%-80%
	Clean plasticbags	50%

waste rubber	Feedstock	Oil yield
Rubber cable		25%-35%
Sole of shoes		25%-35%
Mixed sole		20%-30%
Sneakers		20%-30%
Waste chemical fiber carpet		30%
PMMA		40%
Miscellaneous rubber		35%

By adding PE,PP,PS we can gain up 40% more oil with higher purity – lower viscosity.

Advantages:

- ..mobility - you don't need any building permit – there are no constructions – just unpack and start.
- ..durability – all is inside standard 40" containers
- ..move it where you need and start process
- ..closed system – no odors
- ..you get paid 4x: >disposal of tires,plastic; >disposal of oil; >sale of fuel oil; >sale of coal;

And best part it is 100% Ecological – request more informations – No ecological footprint !

In previous descriptions you may chance to read what is MobiRec, how does it work and what production capacities approximately have according to used material and its purity.

At this page I will show you price and return of investment if we recycle tires. Reason is simply, it is a material with lowest amount of gathered oil it means also slowest return of investment.

Investment

MobiRec price is fixed to 400.000 EUR DAT.

Price include:

1. Container one - Pyrolysis reactor with 3 burners.
2. Container two - Distillation to separate oils and Fractionated distillation unit to remove odor from three MOBIREC products.
3. Container three - Tanks for products, -Gas station- Generator [3Phase, 400V, 50Hz, 25kW], Pumps, Cooling station, Briquette machine, Sorbent, Feeder, Electromagnet, Vacuum cleaner, ventilator, (2A)Used oil suction pump with basket filter, Grinder, Compressor LED Spot lights, contact spray, connection cables with plugs, hoses and storage for drip-Matt and tools.
4. Free Global shipping DAT – delivery to any destination, excluding local customs, taxes and other local fees.
5. Green footprint ticket – for every sold MOBIREC we will plant 3500 trees (approx 5ha). *

Return on investment

Investment		-400.000 EUR
1 day	2.700 l of Fuel Oil	x 0,5 EUR/l = 1.350 EUR
20 days	54.000 l of Fuel Oil	x 0,5 EUR/l = 27.000 EUR
1 year – 260 days	702.000 l of Fuel Oil	x 0,5 EUR/l = +351.000 EUR
1 year – 260 days	702 Kg of Coal and Steel	x 80 EUR/t = +56.260 EUR
Total	Brutto profit per first year	+7.260 EUR

This very simple calculation prove that Investment can be returned within one year, if you have enough of material to daily one cycle run or even better continuous production.

I'm not presenting cost for 3 member crew because it will differ country by country and there are always people who sort plastic at site so we can talk about relocation – not about hiring of a new crew. Also I didn't mention other incomes:

! MobiRec can burn as Fuel used Oil (Mineral, Synthetic etc.) - It is usual to charge like 0.2 EUR/l for ecological waste of oil. If you are capable to collect used oil periodically you can earn at least:

A. +100 EUR / day (0.2 EUR x 500l)

B. and you have every day +500 l more of Fuel oil = +250 EUR.

= . 350 EUR x 260d = +91.000 EUR/year

- You may also receive money for waste of plastic from collective fund, which should easily pay crew and maintenance whenever your business is located.

*1 Adult Oak consume per year ~1,47 ton of CO₂ ~ 366 Liters of Diesel / Fuel Oil;

One cycle consumption (500l) and production (2700l) equals to 9 trees/day x 260 days

= food for 2340trees per year in average, to consume all exhaled CO₂ from all produced and burned Fuel oil.

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<http://www.icbe.com/carbonDATABASE/weightconverter.asp>

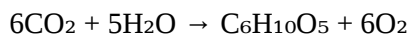
100-foot tree with a 9' trunk has a volume:

$$v = \pi r^2 h = \pi * (4.5^2) * 100 = 6362 \text{ cubic feet.}$$

white oak weighs 47 lbs / cubic foot.

So the tree at maturity weighs 299,000 pounds. I will pretend that the tree grows at a uniform rate, so that is 2990 pounds per year over its 100-year lifespan. About 60% of a living tree is cellulose, the rest is mostly water; only the cellulose contains carbon. So that is $2990 * 0.6 = 1794$ pounds of cellulose per year.

Cellulose, $C_6H_{10}O_5$, is produced from CO_2 as:



(The sequence of reactions that result in cellulose is much more complicated, but that doesn't matter for this analysis.) Atomic weights are (very round numbers): C=12, H=1, O=16. To produce 1 mol of cellulose (162 g) requires 6 mol of CO_2 (264 g) and 5 mol of water (90 g) and releases 6 mol (192 g) of oxygen. Therefore, you can figure out the quantity of CO_2 absorbed from the mass of the tree. 1000 kg of tree soaked up 1630 kg of CO_2 .

... So:

$$1794 \text{ lbs} * 1.63 = 2924 \text{ lbs of } CO_2$$

In a year's time, a single white oak gains 2990 lbs, trapping 2924 lbs of CO_2 . It releases 2130 lbs of O_2 . It takes 0.68 white oaks/year to convert a ton of CO_2 .