

『almost water...』



	①	②	③
(W)	50%	75%	87.5%

↑ water rate ↓

Item	number of data		
	1	2	3
HCV (J/g)	45.850	45.910	45.930

※ HCV = higher calorific value.



There is no difference
in higher calorific value.

『another method of use』

• Emulsion paints

It is a mixture of oil,
resin and water.

It does not have an effect
on a human body and
environment.

『Q and A』



When did we start
Emulsion fuel?

You started it about more
than one hundred years ago.



What can a surface-
active agent do?

It can be mixed with
oil and water.



Why does combustion
efficiency improve?

If you heat water in a
mixture of oil and water
it will boil and explode.
The oil becomes particles.
The surface area for oil
gets larger, so the oil
becomes easier to burn.



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『About EF』

* EF = Emulsion fuel



EF is a mixture of water and surfactant in a fuel oil. It's the same as mayonnaise. 「egg yolk + oil + vinegar」 = mayonnaise!

It is used as boiler fuel and for diesel engines.

『Our purpose』

We want a lot of people to know about EF because the reason that EF isn't used by a lot of people is most people don't know a lot about it.

『Advantages and disadvantages』

< advantages >

1 Fuel cost can be reduced

< Reason >

The mixing ratio of water was limited to 20 %.

With the introduction of nano-emulsion technology, a ratio with about 50 % water can be used as fuel regardless of oil type.

2. Contributes to environmental conservation

< Reason >

It reduces greenhouse gases such as carbon dioxide, nitrogen oxide and sulfur oxide.



< disadvantages >

1. water and oil easily separate over time.



It cannot be used as EF.

2. It is difficult to use EF in cold areas such as the east of Japan.

< Reason >

It freezes because it contains water. After that, it becomes difficult to use.

