

4. How to use

o How to use

- Boiler fuel.
- Fuel for cars and buses.
- Ship fuel etc...

o Summary

Nano emulsion fuel has many advantages that make it seem more beneficial than regular emulsion fuel. However, there are some drawbacks still that have prevented it

from replacing the original. More research still needs to be done.

5. Consideration

As of now fossil fuels are still the most used fuel in the world, but it is not a resource that we can continue to use. Emulsion fuel is one alternative but it has a clear drawback - water and oil easily separate. Nano emulsion fuel solves this problem, even if there are still some disadvantages.

Reference site URL

三丸 機械工業公式ブログ
エマルジョン燃料とはどういふもの?
特徴や使い道をご紹介します。

<http://sanmaru-m.co.jp/blog/2025/11/18/117>

ナノマイザー株式会社

ナノエマルジョン燃料技術

<http://www.nanomizer.co.jp/Japanese/environmental-energy/NEMF-tec.html>

NEW FUEL
NANO
EMULSION
FUEL

12 HR

02 GROUP

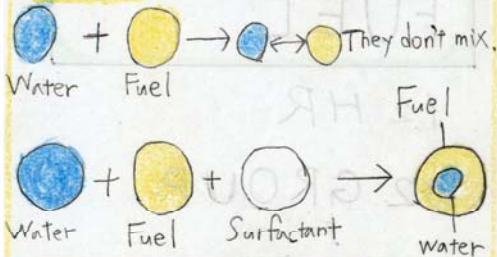
~ member ~

1. What is emulsion fuel?

What are emulsion fuel materials?

They are water and fuel mixed with a surfactant.

Example



How to make

1 Mix the water and fuel

2 Mix a surfactant into the mixture.

3 Use a high speed mixer to combine the three components.

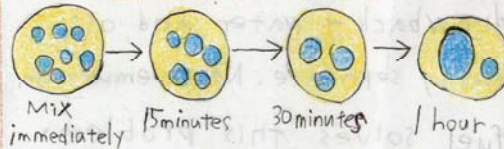
*: Salad dressing is made of water-based oil and regular oil. Shake vigorously to mix. It is the same way to as emulsion.

2. What is nanoemulsion fuel?

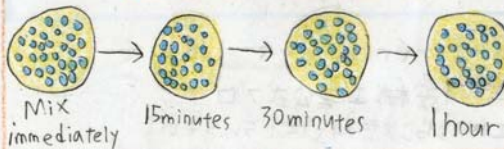
It's made of water particles finer than emulsion fuel.

The nano emulsion fuel's performance became better than regular emulsion fuel.

emulsion fuel



nano emulsion fuel



It is hard to separate even after a long time.

3. Advantages and Disadvantages

Advantages

- Can reduce the use of oil.
- Environmentally Friendly,
- The combustion efficiency is increased.
- Less exhaust gas.

Disadvantages

- Water freezes below 0 0 celsius.
- Separates over time.
- High cost.
- Since fuel is mixed with water, the flash point is increased.