

excellium
PRO Concentrate



Excellium Pro Concentrate premium additive

A quick-win solution for Carbon Footprint Reduction



TotalEnergies

What is Excellium Pro Concentrate?

Excellium Pro Concentrate is the 'B2B' available version of Excellium® premium diesel fuel technology – dispensed at TotalEnergies service-stations around the world – in the form of a **pure and concentrated fuel additive**. As such it benefits from the technological backup and experience of TotalEnergies to develop and market high quality, safe to use and recognized energy saving premium diesel fuel.

Excellium Pro Concentrate is an easy-to-implement quick-win to save from 2 to 5% of CO2 emissions in Diesel fuel powered applications on the road, off-road and down to marine vessels.

How does Excellium Pro Concentrate work in a Diesel engine?

Excellium Pro Concentrate is a **100% organic** (metal free) multifunctional additive increasing fuel efficiency and engine protection.

It combines the benefits of :

- A **high-performance deposit control system** for better fuel droplets atomization, injector cleanliness and anticorrosion effect ;
- A **combustion improver** in the form of cetane improver inducing more radicals in the combustion process and a smoother effort on the piston for a better yield ;
- A **friction modifier** reducing friction in the injection pump and in the ring-piston area ;
- An **anti-ageing system** to prevent fuel degradation related issues (filterability, oxidation and acidification).

Combining of the above components leads to valid fuel economy figures (typically from 2 to 5%), thus CO2 savings. Because **Excellium Pro Concentrate** acts on many engine parameters and does not rely on a unique mode of action, all Diesel engines, whatever their design and operating mode, will benefit at some point from one or all the technical effects.

Excellium Pro Concentrate is the TotalEnergies in-house ultimate optimization of fuel additive design as in use today in premium diesel fuels from major retailers. **No more, no less.**



What are the CO2 savings obtained with Excellium Pro Concentrate?

Excellium Pro Concentrate has been used and tested in the full possible scope of equipments and industries using a Diesel engine. It has always led to >2% fuel and CO2 savings such as in heavy-duty chassis-dyno certified tests (3,3%), 125 buses public transportation fleet test (2,4%), mining operations in Zambia and Colombia (2,4%), coaches transportation in Morocco (4,1%)...

Why also use Excellium Pro Concentrate with bio or renewable fuels ?

Excellium Pro Concentrate has been developed according to the latest industry trends including new popular biofuels (FAME or UCOME derivatives) and renewable fuels (incl. HVO). Here, in addition to the CO2 saving effect of **Excellium Pro Concentrate**, it is essentially the ability of the technology to act as a **'safety net'** for fuel and engine protection that is pursued, when considering the technical drawbacks of these new fuels.

Companies having gotten used to the use of **Excellium Pro Concentrate** in fossil diesel (mainly for CO2 savings) **will be ready** when they will have to consider the biofuels turn and the obligation to mitigate their technical drawbacks.

How to use Excellium Pro Concentrate?

Excellium Pro Concentrate consists of a range of closely related products varying in terms of cetane improver content and an option for cold flow improvement of diesel fuel. Each grade has its own specific and optimized dosage, typically 700ppm volume = 0,7L / 1000L = 700ml/m3.

Excellium Pro Concentrate is available in bulk, 1000L IBC and 185kg drums. 5L cans are also available upon request.

Excellium Pro Concentrate is available worldwide through TotalEnergies Marketing & Services affiliates network and some distributors.

TotalEnergies EP Namibia: Pioneer affiliate in implementing **Excellium PRO Concentrate**

2023: Feasibility & no-harm confirmation

- Pilot test with Drillship engines (1st worldwide)
- Objective: Confirm compatibility with standard fuel system & "no-harm" performance**
- 12+ months continuous use with no impact to engine performance
 - Fuel savings indication observed during rig transit to Namibia

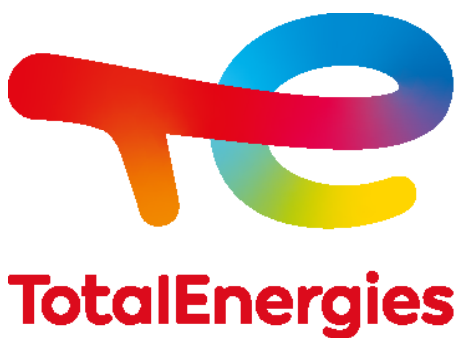


2024: Fuel savings tracking & confirmation



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- Extension of Fuel additive use to Semi-submersible Rig
 - Rig equipped with accurate Fuel consumption tracking system (Individual engine rooms flowmeter & specific emissions-reporting application)
- Objective: Measure & report actual fuel & CO2 savings**



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