



## EcoGrease

EcoGrease is a balanced formula of selected bacteria strains for the biological treatment of fats, oils and greases (FOG) of animal and plant origin. EcoGrease breaks down the recalcitrant part of the fat molecule: the long chains of fatty acids. Other strains present in the formulation degrade proteins, and carbohydrates present in the waste water.

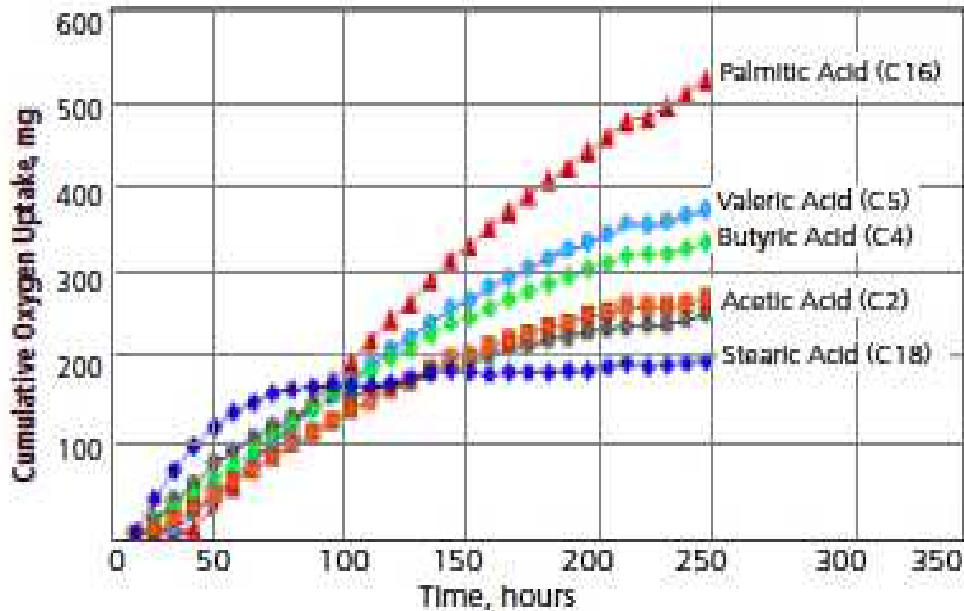
EcoGrease reduces odors produced by other microbes such as hydrogen sulfide and rancid odors caused by the breakdown of volatile fatty acids common in septic and anaerobic systems. The partial breakdown of fat causes a reduction in pH creating an environment that inhibits the activity of most bacteria. EcoGrease strains work well at low pH, and on the contrary, tend to raise the pH which makes the environment more favorable for the activity of other microbes responsible for the degradation of organic matter.

### EcoGrease specific advantages

- Speeds up the activation of new systems and increase stability of plant operations with fluctuating influent loading.
- Enhances organic matter removal and improves protozoan diversity and abundance.
- Reduce costs associated with maintenance of waste water plants.
- Reduce or eliminate the need to remove grease from the systems.
- The formulation is non-corrosive to plant equipment and mechanical systems.

EcoGrease is recommended for use in grease traps of diverse food processing plants including fish, meat, poultry, dairy, bakery, vegetable and plant oil processing operations. EcoGrease is also recommended for municipal waste water treatment plants, as well as slaughter houses where accumulations of FOG are a problem.

Degradation of organic acids by EcoGrease is measured by oxygen uptake. Degradation of organic acids depends on temperature and oxygen availability. EcoGrease bacteria are much more efficient at breaking down fats than native bacteria present in grease traps.



EcoGrease bacteria have the ability to grow on various problem fatty acids, particularly stearic (C18) and palmitic (C16) acids, which can account for 80% of the problem acids deposited. Valeric (C5), butyric (C4) and acetic (C2) acids are short volatile acids that are easier to degrade, but they are the cause of bad odor in septic systems and in lagoons under anaerobic conditions. The intakes of these fatty acids are proportionally dependent on temperature and oxygen availability.

## Characteristics of EcoGrease

Bacteria count:	5 billion per gram
Shelf life:	2 years
Humidity:	15%
Density:	0.6 to 0.8 gr./cm <sup>3</sup>
Appearance:	Light brown powder

The strains present in EcoGrease work within a pH range of 4.5 to 8.5, with an optimum of 7. The temperature range for activity ranges between 10 and 45°C. The growth and activity of the strains doubles for each 10°C increase in temperature.

## EcoGrease Application Methods

EcoGrease can be added directly to the waste treatment system, preferably to the influent stream, aerated basin or grease trap. A small amount of the product can be sprinkled on the accumulated fat to stimulate its degradation.

For toxic waste or short retention times, hydration of the products for one hour prior to addition to the system is recommended, at a dilution rate of 1 kilogram in 15 liters of water. For best results use water at a temperature of 20 to 30°C.

## Dose rates

In order to determine the application dosage that your water treatment system will require consult with our distributor. The required information needed to get a dose rate include composition or origin of waste, oil and grease concentration or volume of grease layer accumulated, and flow rate (m<sup>3</sup>/day).

### Grease traps in restaurants (approx. 1,500 gallons)

Saturated systems: Apply 300 grams the first day, 300 grams the second day, and continue to apply 120 grams daily until the system is stabilized.

Maintenance dose: Add 30 to 60 grams daily, depending on the amount of fat or grease added to the system.

### Industrial grease traps

Daily flow		Daily dose	
Gallons	Cubic meters	Ounces	Grams
< 3000	< 11.35	8	230
3000 – 10000	11.35 – 37.85	12	345
10000 – 20000	37.85 – 75.70	20	570
20000 – 50000	75.70 – 189.25	26	740
50000 – 100000	189.25 – 378.50	36	1026
100000	378.5	40	1140

## **Storage and handling**

- Store EcoGrease in a sealed container, in a cool and dry location. After removing needed amount seal container to store.
- We recommend storing product at a temperature between 1 and 25°C.
- Wash hands with soap and water after handling the product.
- Avoid contact with eyes.