

Cosmo Oil Group environmental technology and products

Automotive oil products (Cosmo Oil Lubricants Co.)



Cosmo LIO SL series



Kaisei

Oils for gasoline engines "Cosmo LIO SL(*1) series"

Oil for diesel engines "Shinsei"

Eco Diesel "Kaisei"

Oil for natural gas engines "Cosmo CNG Oil"

Oil products for other uses (Cosmo Oil Lubricants Co.)



Cosmo Underroll series

Biodegradable lubricants "Cosmo Terra series"

Hydraulic oil "Cosmo Super Epoch UF46"

Metal cutting oil "Cosmo Clean Cut Cool series"

Lubricating oil for food and drug processing machinery "Cosmo Underroll Series"

Coating agents (Cosmo Trade & Service Co.)

Heat insulation coatings "Super Therm"

Concrete protector and strengthener "Ashford Formula"

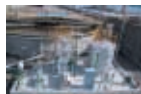
Plant facilities



Hydrocarbon vapor recovery unit



Chemical-free boiler water production unit



Excess sludge reduction unit

Hydrocarbon vapor recovery unit (Cosmo Engineering Co.)

Volatile organic compound (VOC) recovery unit (Cosmo Engineering Co.)

Chemical-free boiler water production unit* (Cosmo Engineering Co.)

Excess sludge reduction unit (Cosmo Engineering)

Dioxin removal unit for wastewater (Cosmo Engineering Co.)

Wastewater treatment technology (Cosmo Engineering Co.)

Wastewater treatment system "Bioflora 01" (Cosmo Eco Support)

Benzene utilization (Cosmo Matsuyama Oil Co.)



Bioflora 01 unit



Aromatics extraction unit

Natural gas fuels (Cosmo Oil Gas)

ECOWILL
home-use LP gas engine/
cogeneration system



Liquefied Petroleum Gas

LP gas engine cogeneration system for home use (ECOWILL)(*3)

Others (Cosmo Matsuyama Oil Co.)

Base material for neutrino detector, "Pseudocumene"

- *1 SL: Refers to an international standard prescribed by the API (American Petroleum Institute).
- *2 DPF: Refers to Diesel Particulate Filter, which removes soot from the exhaust of diesel cars.
- *3 ECOWILL: is a brand name owned by the 3 city gas companies, used by Cosmo Oil Gas with the permission of Osaka Gas. The equipment is made by Honda Motor Co., Ltd.

These oils keep the engine clean, increase heat resistance, and reduce fuel consumption. They also help reduce engine oil consumption.

Chlorine content is one-tenth that of conventional oils. Extends engine life and mileage between oil changes.

For use in engines with DPF(*2), this diesel engine oil increases heat resistance and reduces wear.

Special oil for natural gas and LP gas engines, with increased heat resistance, high-temperature detergency and lower wear. Extends engine life and mileage between oil changes.

This lubricating oil, which can be decomposed by microorganisms into carbon dioxide and water, has been certified as an Eco Mark (JEA: Japan Environment Association) product. Having a wide range of applications, including port industry equipment, construction and agricultural equipment, railway cars, outboard motors, chainsaws, and others.

This non-zinc group, high flash point, low wear hydraulic oil conserves electric power and reduces waste material generation (extended life).

This metal cutting oil is chlorine-free. Helps solve problems associated with chlorine in waste oil disposal and cleaning processes.

This lubricating oil meets the requirement of USDA/NSF H1. Has been used extensively at HACCP-certified food and medical product factories around the U.S., Europe and Japan.

A heat-insulating coating material first developed by NASA. We are developing a broad range of applications including insulation for railway cars, buses and trucks in addition to roofing and piping.

This product extends the life of concrete floors and suppresses concrete dust. Has applications at distribution centers, home improvement centers, and factories, etc. Imported from the U.S.

A unit for recovering hydrocarbon vapors from gasoline, etc., using our unique "Cosmo adsorption method." Now used at petroleum facilities not only of Cosmo Oil Group but also of other companies.

Recovery unit using the same technology as vapor recovery unit. Praised for its high recovery rate, space-saving size, and high level of safety, it is widely used in chemical, printing, and pharmaceutical industries.

Eliminates chemicals added to boiler supply water and cuts volume of blow* water. This enables a matching reduction in fuel use, and contributes to prevention of global warming.

When installed in addition to the existing activated sludge unit, this unit reduces generation of excess sludge. By reducing excess sludge, which formerly was processed as industrial waste, by 90%, this contributes to the reduction of the volume of garbage.

Uses our own independently developed activated carbon for the treatment of wastewater contaminated with dioxins. Helps remove dioxins in wastewater from final treatment facilities and in the discharge from the dismantling of incinerators.

A technology that combines a high-efficiency activated sludge unit, denitrification and phosphorus removal units. It is being used for advanced treatment of effluent from not only oil refineries, but also pig farms and other facilities.

Using microorganisms, this product decomposes oil and organic materials in wastewater into water and carbon dioxide. No chemicals or filtration films are necessary.

Takes benzene generated from the benzene separation process at oil refineries and uses it as an ingredient for upgrading chemical products by processing it with equipment such as aromatics extractors.

Cosmo Oil Gas supplies LP gas, a clean energy that has low environmental impacts similar to natural gas. Also is working to boost demand for LPG by promoting advanced LPG -powered cars, basic LPG fueling stations, and LPG cogeneration for houses. We will work on other clean energies such as LNG and DME, promoting a stable supply of gas energies in harmony with the environment.

ECOWILL is generated using clean LP gas and the heat produced upon generation is used for water and room heating. Primary energy consumption is cut by 20%, and there is also a cut by some 30% of CO₂, which is a cause of climate change. With an energy use rate of 85%, twice the energy efficiency of current electrical supply systems is achieved. In 2004 monitored sales were commenced in LP gas exclusive distributors, using as the showpiece the product's contribution to environmental conservation.

This product is used as a base material in a new method of neutrino detection at Kam LAND, a neutrino detection facility for a research project organized by Tohoku University.