



GARDENING



FORESTRY



BOATING



CONSTRUCTION



SNOW CLEARING

Aspen 2 and Aspen 4 are virtually free from harmful substances such as benzene, aromatic hydrocarbons or olefins; substances that can cause serious health problems. Aspen alkylate petrol also keeps the spark plugs and combustion chamber cleaner. Aspen can be stored for a long time without any deterioration in quality, which makes your engine easy to start even after standstill periods. There are numerous environmental benefits, such as reducing the formation of ground-level ozone (smog) by about 40%.

Aspen 2 is alkylate petrol premixed with 2% biodegradable 2-stroke oil, suitable for chainsaws, clearing saws, hedge trimmers, mopeds, lawn trimmers, power cutters and other land-based 2-stroke engines.

The oil in Aspen 2 has been selected and developed for the future. It is completely synthetic with as much as 60% renewable content, it is biodegradable (more than 80% after 28 days) and free from both ash and solvents. The oil gives an extremely clean engine and has optimum lubrication characteristics at all engine temperatures.

Aspen 4 is alkylate petrol without oil, suitable for lawn-mowers, rotary cultivators, snow blowers, boats and other 4-stroke engines. Ordinary petrol

contains ethanol, which attracts moisture, and can cause engine failures. Aspen alkylate petrol contains no ethanol, making it ideal for use in for example marine environments. To use Aspen alkylate petrol in your 2-stroke outboard engine, simply mix Aspen 4 with outboard oil. To minimise the environmental impact, choose a biodegradable oil.





Ordinary petrol is produced during the crude oil refinement process, in which various fractions are processed in different ways and then combined. Petrol is therefore not homogeneous, but a mixture of several substances. Ordinary petrol purchased at petrol stations contains around one hundred different substances, all with different impacts on performance, health and the environment. Many components are extremely hazardous and toxic to humans and our environment.

Alkylate is produced synthetically from the pure gases that are released when crude oil is refined. The result is a very clean petrol, which consists of around ten of the least harmful substances, and is therefore virtually free from hazardous constituent components such as benzene, aromatic hydrocarbons, sulphur and olefins.

EASY START

If you want your lawnmower or chainsaw to start easily after winter or summer storage, Aspen alkylate petrol is the right choice. Ordinary petrol deteriorates if it is stored in containers or petrol tanks, resulting in starting and operating problems. Aspen, on the other hand, retains its quality ensuring hassle free operation over many years.

PLASTIC CANS AND THE ENVIRONMENT

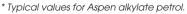
The polyethylene plastic, from which the containers are

made, has been selected with the environment in mind, and can be recycled to produce both materials and energy. When recycled, only carbon dioxide and water are produced.

ACCESSORIES

Aspen also carries special filling aids for even safer and simpler handling, for example a filler spout, which stops the flow when the tank is full, eliminates the need for a funnel and reduces spills and fumes.

	Aspen*	Alkylate**	EN228***	Comments
Octane rating RON	95	>93	95	Knocking resistance at low engine speed.
Octane rating MON	92	>90	85	Knocking resistance at high engine speed.
Vapour pressure (kPa)	55-65	55-65	55-95	High vapour pressure produces more petrol fumes and operating problems in heat. Local deviations may occur.
Sulphur (ppm)	<2,7	<10	<10	Very harmful for the environment and health. Contributes to the acidification of lakes, for example.
Aromatic hydro- carbon content (vol %)	<0,45	<1	<35	Very harmful for the environment and health. May cause nerve damage, headaches, fatigue and nausea.
Benzene content (vol%)	<0,03	<0,1	<1	Benzene is the most dangerous aromatic hydrocarbon in petrol. May cause blood cancer (leukaemia).
Olefin content (vol %)	<0,3	<1	<18	It is harmful for the environment and health, causes operational problems and impairs shelf-life.
Ethanol (vol %)	0	0	<10	Attracts moisture which may lead to engine failures.
Oxidation stability (min)	>11340	>360	>360	A measure of the way petrol tends to react with oxygen at high temperatures. A low value means the petrol will age faster.



^{**} Alkylate Standard SS 15 54 61:2008.







Aspen alkylate petrol is developed and produced by Lantmännen Aspen AB, Sweden. Aspen was founded in 1988 with the aim of improving forestry workers' work environment where they were spending whole days in harmful chainsaw exhaust gases. It was Roland Elmäng, a fuel expert at Volvo, who saw the benefits of using alkylate in chainsaws instead of regular petrol. It all started in Lerum at Lake Aspen, hence the name. Today Lantmännen Aspen's business is based in Hindås outside Gothenburg. The company is a member of the Lantmännen Group, one of the biggest corporate groups in the Nordic region.









^{***} EN228 Standard SS-EN 228:2013 (ordinary petrol).