

New list of winter tyres without toxic oils

For the first time there is now a list of winter tyres without carcinogenic and environmentally hazardous HA oils (high aromatic oils). A new unique method of analysis has made it possible to determine which oil is included in a finished tyre. Only 10% of all new winter tyres available on the Swedish market do not contain oils that are classified as toxic. It is time to show the tyre industry that we do not want to have tyres with dangerous oils!

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Project partners from different areas

The Gothenburg Region Association of Local Authorities, has carried out a study of the oil content in the winter tyres that we are now required by law to put on our passenger cars in cooperation with

- The County Administrative Board in Västra Götaland
- Västra Götalandsregionen
- Business Region Göteborg
- Folksam Insurance Company.

The Manufacturers were asked about their tyres

Manufacturers and importers on the Swedish market have been asked about the toxic oils included in the treads of their winter tyres. The treads are of particular interest since they include the highest oil contents, and it is also the rubber from the treads that winds up on our roads.

The Swedish National Testing and Research Institute in Borås has verified the manufacturers' response using a completely new method of analysis. The results are reported in the enclosed list. Only about 10% of all new winter tyres available on the Swedish market do not contain oils that are classified as toxic.

It should be noted that the list only refers to whether the tyre tread contains toxic oils or not. The manufacturer or importer is solely responsible for the technical function of the tyre. The latest functional studies of winter tyres can be found in different motoring journals.

Consumer power against toxic tyres

All operations sponsoring the study will act to ensure that the list will have a major impact. Västra Götalandsregionen, Sweden's second largest employer with 47.000 employees, will require winter tyres without toxic HA-oils in all purchasing. Folksam Insurance Company will require that their leased cars, which drive almost 10 million kilometers annually, are only equipped with winter tyres from the list.

More information

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Selection criteria for the tyre list

No toxic oil in tyre tread

The basic requirement for a tyre to be included on the list is that no oil classified as carcinogenic or environmentally hazardous may be found in the tyre tread.

This may also be stated as follows: the oil must not require labelling according to EU criteria for classification and labelling (Directive 67/548/EEC with amendments). To avoid cancer classification the measured content of polycyclic aromatics in the oil must be less than 3%.

New method of analysis of oil content

Previously, it has been difficult to verify which oil a vulcanized tyre contains. Nordtest commissioned the Swedish National Testing and Research Institute (SP) in Borås to develop a method of analysis, based on three ISO standard measurement methods. With this new method of analysis it can now be determined whether a tyre contains labelled oil or not.

If a manufacturer wants a tyre to be included on the list it must be stated in writing that the tyre tread does not contain any oil that requires labelling.

The tyre must also be able to pass a random sample analysis according to SP's method.

Only tyres sold in Sweden on the list

The list only includes winter tyres for passenger cars. Only tyres that are available on the Swedish market are accepted. A classification is made between studded tyres and friction tyres. Special information about exceptions, such as for certain sizes, are stated under notes. The list is not an official directive, but should be seen as a guideline for selecting winter tyres that minimize the risk of damage to health and the environment.

What are HA-oils?

New tracks that lead further

The problem with toxic oils in tyres was discovered six years ago in connection with a study by the Swedish National Chemicals Inspectorate ("Nya Hjulspår" which means "new tracks", KemI 6/ 94). It was noted that just over 60.000 tons of tyres were bought each year in Sweden and a total of 2.1 million tons of tyres in the EU. These enormous quantities of tyres contain not only rubber, but also a large number of additives, including extending and softening oils constituting up to 20% in the rubber mixture.

One litre of toxic oil in each tyre

The oils that are used traditionally are "High Aromatic extracts," HA-oils, which are waste products from refineries where base oils are purified for use in lubricants for example. Through the years HA-oils have been used for many purposes but in all cases – except for car tyres – they are no longer used because the oils are highly hazardous to health and the environment. About one litre of toxic oil may be included in a tyre for a passenger car!

The HA-oils are classified as toxic and must be labelled as carcinogenic and environmentally hazardous on the basis of the large amount of polyaromatic hydrocarbons that they contain. Polyaromatic hydrocarbons - abbreviated PAH - is the generic term for a group of substances, many of which are carcinogenic and toxic to aquatic organisms, among other things. In addition, the majority biodegrade very slowly and can be accumulated in biological materials.

PAH spreads with rubbed off rubber

There are many sources of PAH emissions in the environment, including poor combustion processes, used engine oil, etc. One large source is also car tyres, and the oil companies deliver about **250.000 tons** of HA-oil to tyre manufacturers in the EU – every year! If considering the wear of rubber on our Swedish roads alone, about 1.500 tons of oil are spread via rubber particles to the environment. The corresponding quantity in the EU is estimated to be 30-40.000 tons of oil via rubber particles. The oil is not chemically bound in the rubber, but will eventually be released.

Tyre industry slow to react

When the Swedish National Chemicals Inspectorate report about tyres came out in 1994 and the public became aware of the problems with HA-oils for the first time, the tyre industry adopted a wait-and-see policy – and in certain cases it was clearly negative. With pressure from the transport industry and other large user groups, as well as activity from the retreading industry and certain tyre manufacturers, the trend toward alternative oils has advanced.

Currently BLIC, the interest group for the rubber industry in Europe, also state that they are working on replacing all oils that must be labelled.

This work ought to move faster! This is where we all as consumers come in!

The list of tyres without toxic oils

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New winter tyres for passenger cars without toxic PAH-oil in the tread

Manufacturer/ importer	Tyre brand/ pattern	Studs/ friction
Bridgestone	Bridgestone/ LM 18, LM 22;MZ 02 Blizzak	F
	Bridgestone WT 17	S
	Firestone/ FW 930	F
	Firestone/ FW 935	S
	Dayton/ Winter	F
	Dayton/ DW 600	S
	First Stop Winter	F
Continental	Conti/ Winter Viking 1, Viking Stop 4000*	S
	Conti/ Conti Viking Contact 2*	F
	Gislaved/ Nordfrost II, Nordfrost 3*	S
	Gislaved Soft Frost*	F
	Uniroyal MS Plus 45*	S
Goodyear	Goodyear/ Ultra Grip Ice Navi	F
Kumho/ Dawa däck	KW 11 Stud	S
	I'ZEN 7401§	F
Michelin	Michelin/ Ivalo	S
	Michelin/ Nya Maxi Ice	F
Nokia	Nokia/ Hakkapelitta 2	S

	Nokia/ Hakkapelitta 1**	S
Pirelli	Pirelli/ Winter 160 Plus	S
	Pirelli/ Winter Ice Plus	F
Toyo/ Nordiska Däckimporten	Toyo/ Garit HT, Garit 2	F
Yokohama	Yokohama/ Guardex K2 F 720	F

` = Only tyres labelled "Made in Sweden"

**= Only sizes larger than 13"

Retreaded winter tyres for passenger cars without toxic PAH-oil in the tread

Manufacturer/ importer	Tyre brand/ pattern	Studs/ friction
AGI	AGI/ Sarek55-70, SCM, M+S SC 4, SC N+S 200, M+S 70-200, M+S Alp	S/F
Fighter	Fighter/ MS 1, MS 10, MS 310, MS 33, MS 2, HP 10, HP 410	S/F
Galaxie	Galaxie/ MS 1, MS 200; MS 100; MS 360	S/F
Green Diamond	Green Diamond/ C790, Inari, Alpin Da Capo, Inari, Kristall 1	F S
Mac Ripper	Mac Ripper/ M+SA, MAC 2, MR 100, MR 1	S/F
Don't buy tyres with toxic oil November 2000/ IH		

More information

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