

## **Frequently Asked Questions Regarding Clean Oil Regulation in Europe**

### **What is the regulation?**

On November 16, 2005, the European Commission (EC) adopted a Directive (2005/69/EC) restricting the marketing and the use of certain polycyclic aromatic hydrocarbons (PAHs) in extender oils used in tire production. This directive essentially requires all tires manufactured after January 1, 2010, must be produced without the use of high aromatic extender oils in order to be sold in Europe.

This directive applies to passenger car tires, light and heavy truck tires, agricultural tires, motorcycle tires and retreads.

### **Can tire producers or exporters outside the European Union continue importing tires containing high aromatic oils after January 1, 2010?**

No. All tires produced after this date, whether manufactured in Europe or to be sold in Europe, must comply with the regulation.

### **Did the conversion from aromatic oils to PAH-free oils affect the performance of the tire?**

No. Over the past several years, Cooper has worked with our suppliers to ensure that all aromatic oils being replaced with PAH-free oils have provided comparable tire performance attributes.

### **Has Cooper Tire converted all of its tire production over to PAH-free processing oils?**

No, this regulation only applies to the European Union, so accordingly only those products either manufactured by Cooper Tire in Europe or intended to be sold in the European market must be PAH-free. That is why Cooper does not promote the distribution of tires outside of the region from which they are originally sold. If you export non-compliant tires into Europe, you run the risk of fines and penalties. Cooper is not responsible for any such fine, penalties, or unintended shipping charges due to tires being rejected by European customs and/or for sale of non-compliant tires in Europe.

### **What are highly aromatic oils?**

Highly aromatic (HA) oils are derivatives of the petrochemical industry. They enter into the composition of tires because they are required to facilitate the processing of the rubber compounds. They are also an essential component for the performance of the tire on the road particularly with traction.

### **What are PAHs?**

The presence of polycyclic aromatic hydrocarbons (PAHs) in the environment is primarily due to human activity, but can also occur naturally (i.e., forest fires, volcanoes and other combustion or organic materials in nature). PAHs are produced by all combustion phenomena: waste incineration, iron and steel production, home barbecues, motor vehicle exhaust, open chimney fires, tobacco smoking, gas cooking, etc. Cigarette smoke, for example, contains PAH, just like smoke from cooking and frying.

PAHs are also present in aromatic oils produced by oil refining including extender oils, and thus also end up as a consequence in tires. PAHs as such are not a purposeful addition to tires.

PAHs are also present in the air, water, and ground. Emissions of PAHs coming from abraded tire particulates are minor (2%) relative to total PAH emissions in air, water, and ground (according to the Opinion from the European Commission Scientific Committee on Toxicity, Ecotoxicity and the Environment [CSTEE] in November 2003).

**Are PAHs carcinogenic?**

The European Union has classified eight PAHs as carcinogenic. They are only harmful to human health in the case of chronic exposure (continuous and very long term), according to the European Union Directive which regulates exposure.

Tests with blends of HA oil incorporated into rubber compounds show no carcinogenic effects. As long as PAHs are physically bound in abraded tire particles and they are not available in the environment, they have no carcinogenic effect.

**Are PAHs used as a direct material in tires?**

No, PAHs are not used as a direct material in the compound, but the process oils purchased for tire production contain traces of PAHs.

**Are highly aromatic oils dangerous once they are incorporated into the tire and placed on the market?**

Once the tire is vulcanized at the manufacturing facility and placed on the market as a finished product for sale to consumers, the product presents no danger to the user, whether during physical handling of the tire, during its road use, or at the end of life of the tire.

Several studies (Pasteur Institute, Biolab) have confirmed the impossibility for aromatic oils contained in tires or in blends to be released in their initial chemical state, under test conditions existing in nature. They are closely bound into the mass of the tire.