BASF
We create chemistry

Irganox® 1520 L

Best-in-class antioxidant for synthetic rubbers and enabler for sustainable rubber materials

The benefits at a glance

Durability and waste reduction

- Provides excellent thermal and processing stability for various rubber grades: tire BR, impact BR, solution SBR, emulsion SBR, NBR
- Benchmark for improved process performance
- Gives superior color stability leading to fewer replacements of parts

Cost savings and resource efficiency

- Provides outstanding efficacy at lower concentrations than traditional phosphite antioxidant
- Enabler for overall additive volume reduction

Health and safety

- Replaces the widely-used TNPP Tris (*nonylphenyl)phosphite*) which ECHA *European Chemicals Agency* has listed as a candidate for SVHC *Substance of Very High Concern*
- The liquid physical form eliminates the dust exposure and enables easy handling
- Fully tested to ensure compliance with global regulatory and safety standards
- Food contact approved*
  - FDA compliant
  - European food contact compliant

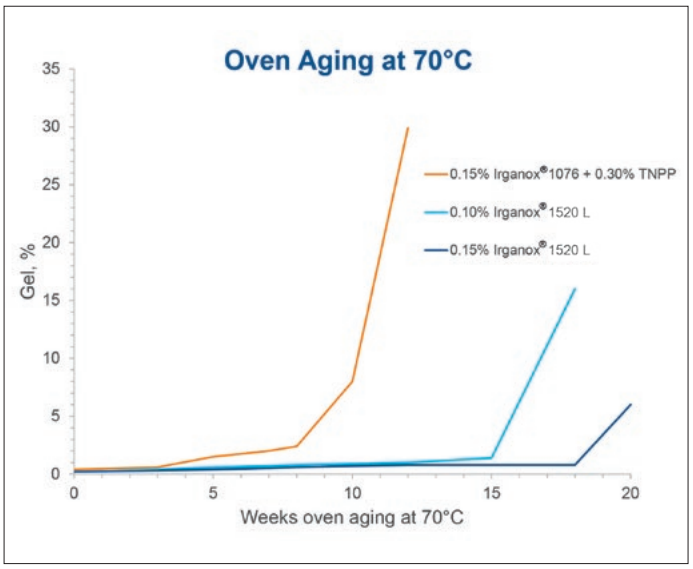
*For details, please request for BASF Food contact certificate

Synthetic rubbers are commonly used for the manufacture of vehicles tires: about half of all rubber volumes ends up in bicycle, car, and truck wheels. Rubber applications are however more diverse than just tires. For instance, a standard internal combustion engine vehicle contains about 200 parts made of rubber. These parts include not only the radiator hoses and the fan belts but also many other parts under the hood.

Rubber is a versatile material that can be made either soft or hard, thereby increasing greatly the range of applications in major industries. They are used for oil and gas harvesting, aerospace exploration, building and construction, and even medical, food and beverage applications, favoring high thermo oxidative resistance during processing and long service life.

Performance of Irganox® 1520 L in low cis BR

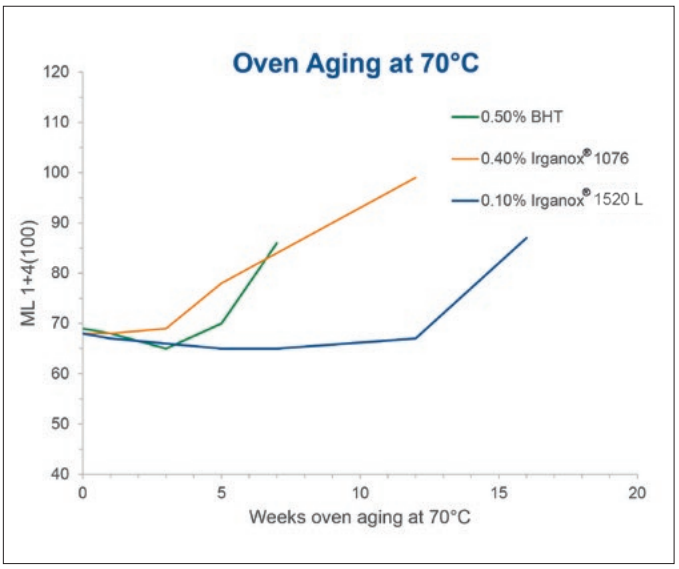
Gel formation after oven aging at 70°C



Significant reduction in gel formation in low cis BR during oven aging at 70°C with much lower antioxidant concentration

Performance of Irganox® 1520 L in S-SBR

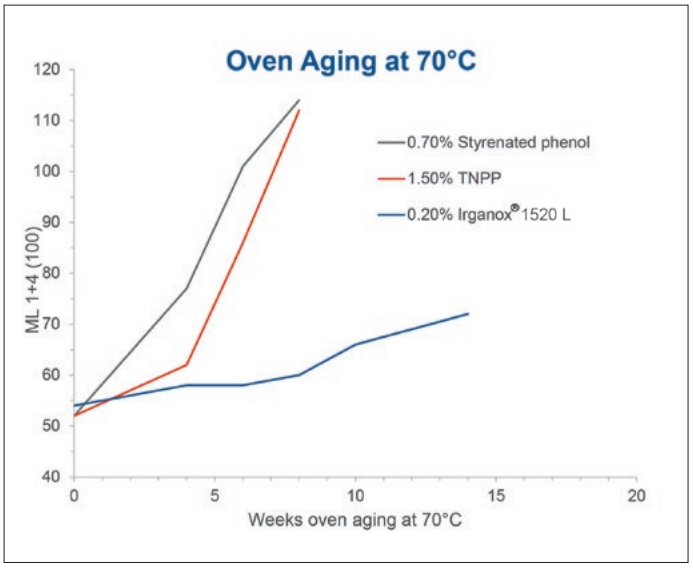
Mooney Viscosity after oven aging at 70°C



Longer thermal stability of S-SBR at 70°C with much lower concentration of Irganox® 1520 L compared to standard phenolic antioxidants

Performance of Irganox® 1520 L in E-SBR

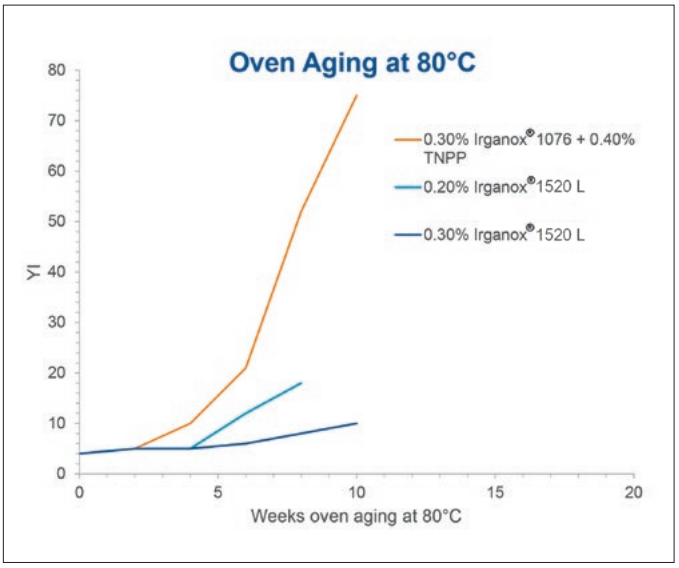
Mooney Viscosity after oven aging at 70°C



Stable Mooney viscosity after oven aging at 70 °C of E-SBR with significantly lower amount of Irganox® 1520 L compared to classical phenolic or phosphite antioxidants for E-SBR

Performance of Irganox® 1520 L in high cis BR

Yellowness Index (YI) after oven aging at 80°C



Improved color stability of high cis BR during oven aging at 80°C with Irganox® 1520 L

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