

Fuel and Lubricant Additives
Fuel and Lubes
Antioxidants

Antioxidants improve the resistance to oxidation of transportation and industrial lubricants

As the costs of operating machinery and vehicles rise, and emission regulations become ever more stringent, new developments in additives for fuels and lubricants enhance lubricant performance, protect engines, and help to reduce maintenance and running costs, as well as improving environmental sustainability.

Aminic and phenolic antioxidants retard oxidation in the oil by reacting with radicals produced in the lubricant; in engine oils this helps to extend the drain interval. By maintaining the integrity of the oil for longer periods they help maintain viscosity, reduce deposit and foam formation, guard against the production of corrosion species, whilst protecting the oil at higher temperatures.

SONGWON also offers antioxidants for biofuels and works together with customers to develop ongoing solutions.

It's all about **the chemistry™**

 **SONGWON**

Product range selection guide

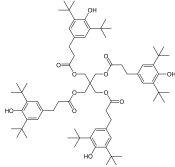
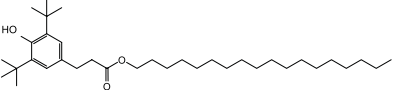
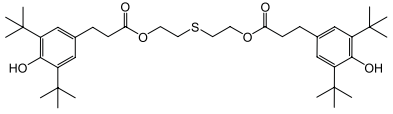
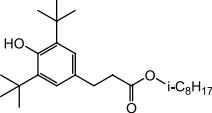
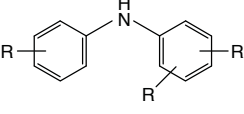
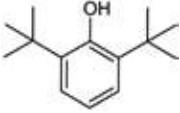
Aminic and Phenolic Antioxidants

	ATF	Compressor oils	Diesel engine oils	Fuels	Gasoline engine oils	Gear oils	Greases	Hydraulic oils	Metalworking fluids	Synthetic base oils	Turbine oils	Vegetable oils
SONGNOX® L101		■			■	■			■	■	■	
SONGNOX® L107			■		■	■	■	■	■	■	■	■
SONGNOX® L115			■		■	■	■		■	■	■	
SONGNOX® L135	■	■	■		■	■	■	■	■	■	■	■
SONGNOX® L670	■	■	■		■	■	■	■	■	■	■	■
SONGNOX® 2,6-DTBP		■		■		■	■	■	■	■	■	■

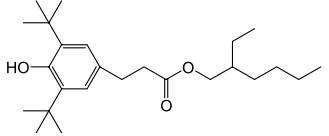
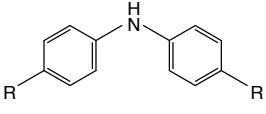
■ Recommended
■ Suitable



Aminic and Phenolic Antioxidants

		Molecular Weight	Melting Range (°C)
SONGNOX® L101 Tetrakis[methylene-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]methane CAS NO. 6683-19-8 PW		1178	110.0 ~ 125.0
SONGNOX® L107 Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate CAS NO. 2082-79-3 CP		531	50.0 ~ 55.0
SONGNOX® L115 Triethylene glycol-bis-3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate CAS NO. 41484-35-9 PW		643	> 65.0
SONGNOX® L135 4,4'-butylidenebis(6-tert-3-methylphenol) CAS NO. 125643-61-0 LQ		390	–
SONGNOX® L670 Bis(nonylphenyl)amine CAS No: 36878-20-3 LQ		nonyl diphenylamine antioxidant	–
SONGNOX® 2,6-DTBP 2,6-di-tert-butylphenol CAS NO. 128-39-2 SL		206	> 34.0

Under development

SONGNOX® L137 Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 2-ethyl-hexyl esters CAS NO. 144429-84-5 LQ		390	–
SONGNOX® L570 Mixture of t-octylated & t-butylated diphenylamine CAS No: 68411-46-1 LQ		butyl, octyl diphenylamine antioxidant	–

Phosphite Antioxidants

Molecular Weight

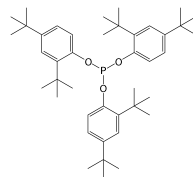
Melting Range (°C)

SONGNOX® 1680

Tris(2,4-di-tert-butylphenyl) phosphite

CAS NO. 31570-04-4

PW, FF



647

181.0 ~ 187.0



Standard Packaging

- **Antioxidants, Solids:** 20 kg PE Bag
- **Antioxidants, Liquids:** 185 kg Steel Drum
190 kg Steel Drum
900 kg IBC
20 MT ISO Tank

Standard pallet size is CP1.

Key to Abbreviations of Physical Forms

- **PW:** Powder
- **SB:** Semi Bead
- **SL:** Solid
- **FF:** Free Flow
- **DW:** Dispersion
- **MB:** Micro Beads
- **FC:** Fusion Crystal
- **LQ:** Liquid or Molten
- **BD:** Beads
- **DF:** Dust Free Flow
- **CP:** Crystalline Powder
- **PS:** Pastilles
- **GR:** Granule
- **FG:** Fine Grind
- **VL:** Viscous Liquid



Transport and Storage

As a general guideline, we recommend storing the products mentioned in this brochure in their original sealed containers in a cold and dry place. For more detailed information on a specific product, please refer to the corresponding **Technical Data Sheet**.

By law, a number of chemical products must be labeled in respect of transport, storage and handling. Thus corresponding care is a prerequisite for their appropriate handling. Furthermore, local legal regulations may apply.

Detailed information is given in the respective **Safety Data Sheets**.

About SONGWON Industrial Group

SONGWON, which was founded in 1965 and is headquartered in Ulsan, South Korea, is a leader in the development, production and supply of specialty chemicals.

The second largest manufacturer of polymer stabilizers worldwide, SONGWON operates group companies all over the world, offering the combined benefits of a global framework and readily accessible local organizations.

Dedicated experts work closely together with customers to develop tailor-made solutions that meet individual requirements.

For further information, please go to:
www.songwon.com





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SONGWON provides customers with warranties and representations as to the chemical or technical specifications, compositions and/or the suitability for use for any particular purpose exclusively in individual written agreements.

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