

DATAGREEN® For automotive

25% smaller, 50% lighter, and stronger

DATAGREEN®, a new family of Nexans data cables, uses minimal electric current to carry data for the control of all vital functions within an automobile: cables to monitor motor efficiency and vehicle behavior, guidance and navigation systems (GPS), and onboard multimedia devices.

Traditionally, pure copper was used as a conductor and to achieve high tensile strength for safe pulling and installation, a larger cross-section of copper was used than actually needed, occasioning extra weight, volume and expense.

By substituting a pure copper with a copper alloy, DATAGREEN® cables fully satisfy the physical, mechanical, electrical, and corrosion concerns of today's harness manufacturers, while significantly reducing pollution and improving overall automotive performance.



What you expect from an automotive data cable

You are a first-tier automotive harness manufacturer requiring data or sensor cables to assure the efficient operation of all automotive systems. You see "global warming" as a serious consumer issue, and would like to see lower CO₂ emissions achieved by lighter cars (requiring lighter cables). You also wish to satisfy the public demand for advanced electronic onboard devices which make harnesses denser, heavier and more complex. You are looking for an alternative to copper which can meet the same performance criteria while offering clear advantages.

DATAGREEN® gives you:

- **Compactness:** over a third smaller than standard data and sensor cables; it goes around tight corners and fits into confined spaces
- **Lightness:** half the weight of standard cables
- **High tensile strength:** both for cutting and assembly, pulling into position on the wiring loom, and also during the car's operational life
- **Easy and rapid installation:** flexibility and seven-core layout make it less vulnerable to breakage; often eliminates the need for costly cable redundancy
- **Environmental-friendliness:** optimizes production efficiency; saves energy; available in zero-halogen versions; fully recyclable
- **Worldwide availability:** thanks to our local plants in emerging countries
- **Less impact of the copper price** on the cable
- **Crimpability:** at least equal to copper

DATAGREEN® 0.22 mm² can replace copper from 0.35 mm² to 0.5 mm²

Parameters	advantages compared to	
	DATAGREEN® 0.22 mm ²	0.50 mm ² copper
Core material	Alloy	Copper
Number of wires	7	Standard
Single wire diameter mm	0.2	Standard
Electrical conductor resistance (at 20°C) Ω/km	100	
Tensile strength N	120	20% stronger
Conductor diameter mm	0.60	33% smaller
Insulator thickness mm	0.30	Standard
Cable diameter mm	1.2	25% smaller
Weight of conductor Kg/km	2.1	55% lighter
Cable weight Kg/km	3.5	50% lighter

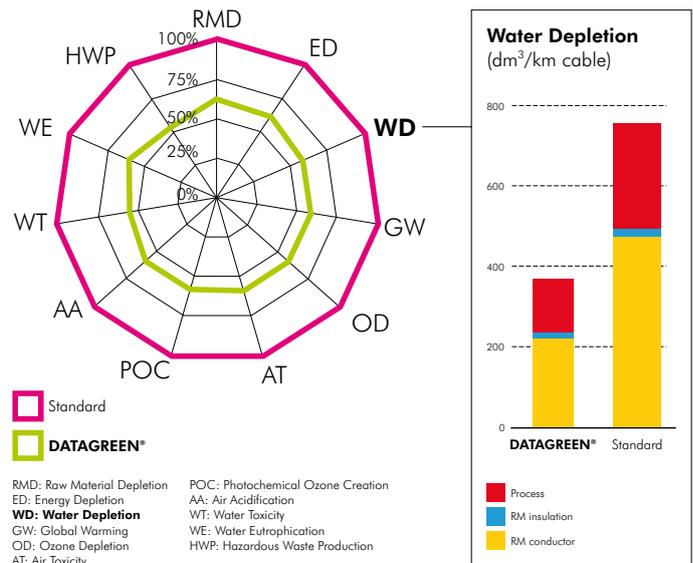
Life Cycle Assessment of the DATAGREEN® cable

Nexans is involved in the fight against global warming and pollution. DATAGREEN® has been developed with regards to the Life Cycle Assessment (LCA). LCA is a process to quantify some environmental aspects of a product or system through all stages of its life cycle. Life cycle of product embraces all of the activities from making, transporting, using to disposing. The typical Life Cycle consists of a series of stages from extraction of raw materials, through design and formulation, processing, manufacturing, packaging, distribution, use, re-use, recycling and ultimately to waste disposal.



Comparison of the environmental impact of DATAGREEN® and standard cables

DATAGREEN® has a lower impact on the environment compared to the current copper cable. DATAGREEN® use far less materials. The 10 indicators including the three most important (Global Warming, Energy Depletion and Water Depletion) are improved by 50%. A major progress for the environment.



Comparison of a 0.22 mm² DATAGREEN® vs. 0.5 mm² copper