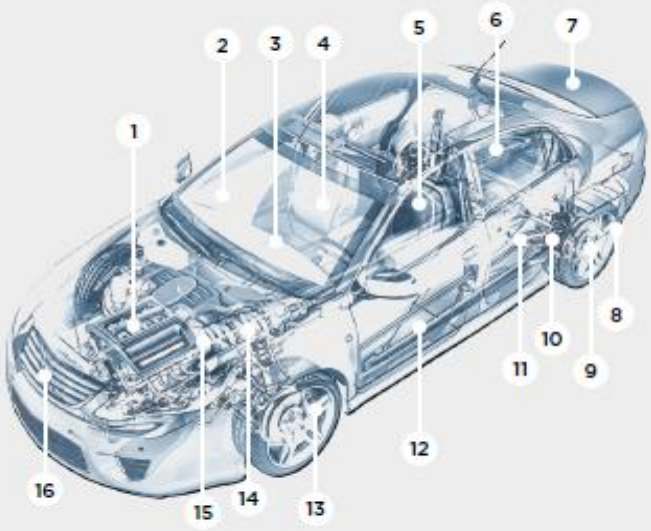
Figure 3

Selected* materials in a passenger vehicle



Selected materials and applications

1 Engine
Aluminium
Nickel *(turbocharger)*
Tungsten *(crankshaft)*

2 Microphone / Speaker
Rare earth elements
Nickel
Iron
Cobalt

3 LED Display
Rare earth elements

4 Windscreen / Windows
Glass

5 Interiors
Leather
Plastics

6 Catalytic converter
Palladium
Plastics
Rare earth elements

7 Paint / Pearlescent finish
Mica
Cobalt

8 Tyres
Rubber
Cobalt

9 Wheels
Graphite *(bearings)*
Steel / Iron
Tungsten *(bearings, ball joints)*

10 Suspension
Steel / Iron

11 Chassis
Aluminium
Steel / Iron
Tungsten

12 Body panels
Steel / Iron

13 Brakes
Graphite
Steel / Iron
Tungsten

14 Transmission
Nickel
Steel / Iron

15 Clutch
Graphite

16 Radiator
Copper

Applications found in electric/hybrid cars

Lithium-ion battery
Cobalt
Graphite
Lithium
Nickel
Rare earth elements
Zinc*
(Tin**)

Materials in applications found throughout a passenger vehicle

Capacitors
Found in systems for brakes, power steering, transmission, electric motors etc.
Mica
Palladium
Tantalum

Electric motors
Found in starter motor, alternator, windscreen wipers, air conditioning etc.
Graphite
Rare earth elements

Plating
Found on engine parts, brake parts, chassis, trims, air conditioning etc.
Nickel
Zinc

Printed circuit boards
Found in systems for braking, engine control systems, safety and security systems, GPS navigation and entertainment etc.
Aluminium
Copper
Gold
Nickel

Solder
Tin

Circuitry
Copper
Gold
Palladium

The materials included in this illustration are restricted to the 18 materials profiled in section 5.3 of this report.
Applications may vary for specific products and other types of vehicles, and in some instances these materials may be substituted.

* Used to manufacture zinc air fuel cells and nickel-zinc batteries, as alternatives to lithium-ion batteries.

** Tin is an important material in lead-acid batteries, but not in batteries used in hybrid/electric vehicles.