

# Products for Automobile (Functional Materials)



Functional material products of Toda Kogyo group support and contribute to develop the cutting-edge technologies for automotive.

## Magnetic Sensor/Encoder

Magnet materials for resin composite



Magnet material compound



## Lithium Ion Secondary Battery

Cathode materials\*



※Products of BASF TODA Battery Materials LLC

## Motor/Pump

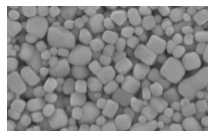
Magnet material compound



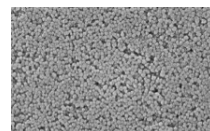
[Molded component image]

## Multilayer Ceramic Chip Capacitor

Barium titanate



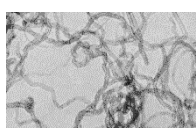
For dielectric layer



For Electrode layer

## Radio wave Absorber/Antistatic Material

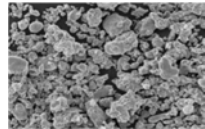
CNT (Carbon nanotube)



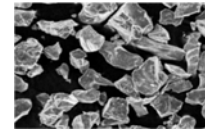
[Under development]

## Inductor/Reactor

Soft magnetic metal material

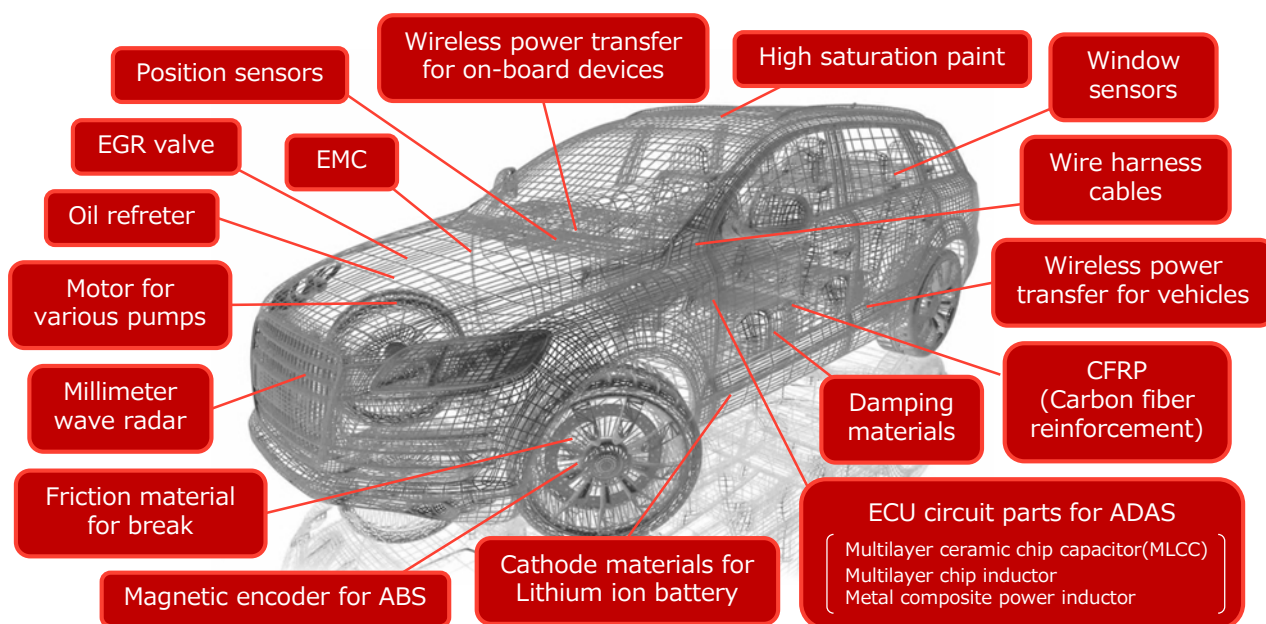


Fe-Si-Cr



Fe-Si-Al

Other TODA KOGYO's functional/component materials are used for automobile.



# Products for Automobile (Component Materials)



Toda Kogyo group has been developing and manufacturing the component materials used various functional devices for automobile.

## Noise Suppression for Electrical Wires and Cables

Extrusion molding type compound for noise suppression covering material



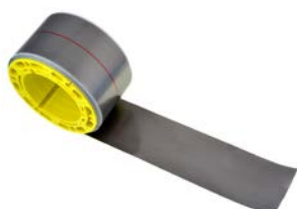
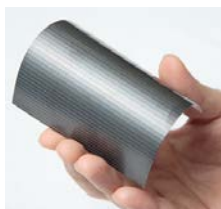
[Molded component image]

Noise suppression clamp filter

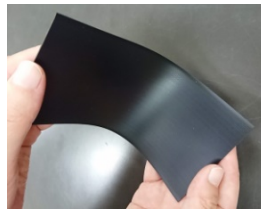


## EMC Sheets

Ferrite/nanocrystalline sheets for magnetic shield (~500kHz) with heat resistance



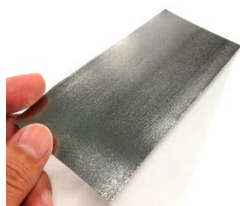
Electromagnetic wave absorbing sheets & the injection molding type compound



[Under development]

## Wireless Power Transfer

Qi standard coil unit for on-board devices & the ferrite/nanocrystalline sheets



Mn-Zn ferrite plates for vehicle/ground



## Converter/Charger

Mn-Zn ferrite cores



## Inductor

SMD power inductors



Ni-Zn ferrite plates for integrated circuit



[Under development]

