Automotive

Engineered sealing solutions
for Automotive applications

ceetak
sealing solutions

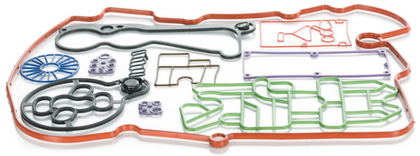
Our products in application

Screenwash & headlight wash system

Peroxide cured EPDM materials as o-rings, washers and hydraulic lip seals with the option of low friction PTFE coatings for optimum performance in pumps, valves, nozzles & sensors.

Transmission & steering

Composite sealing elements designed to combine with mating parts to reduce size, cost and improve assembly.
Complex 1 piece gaskets for valve controls, PTFE seals for low noise and friction at high speeds or high pressures.

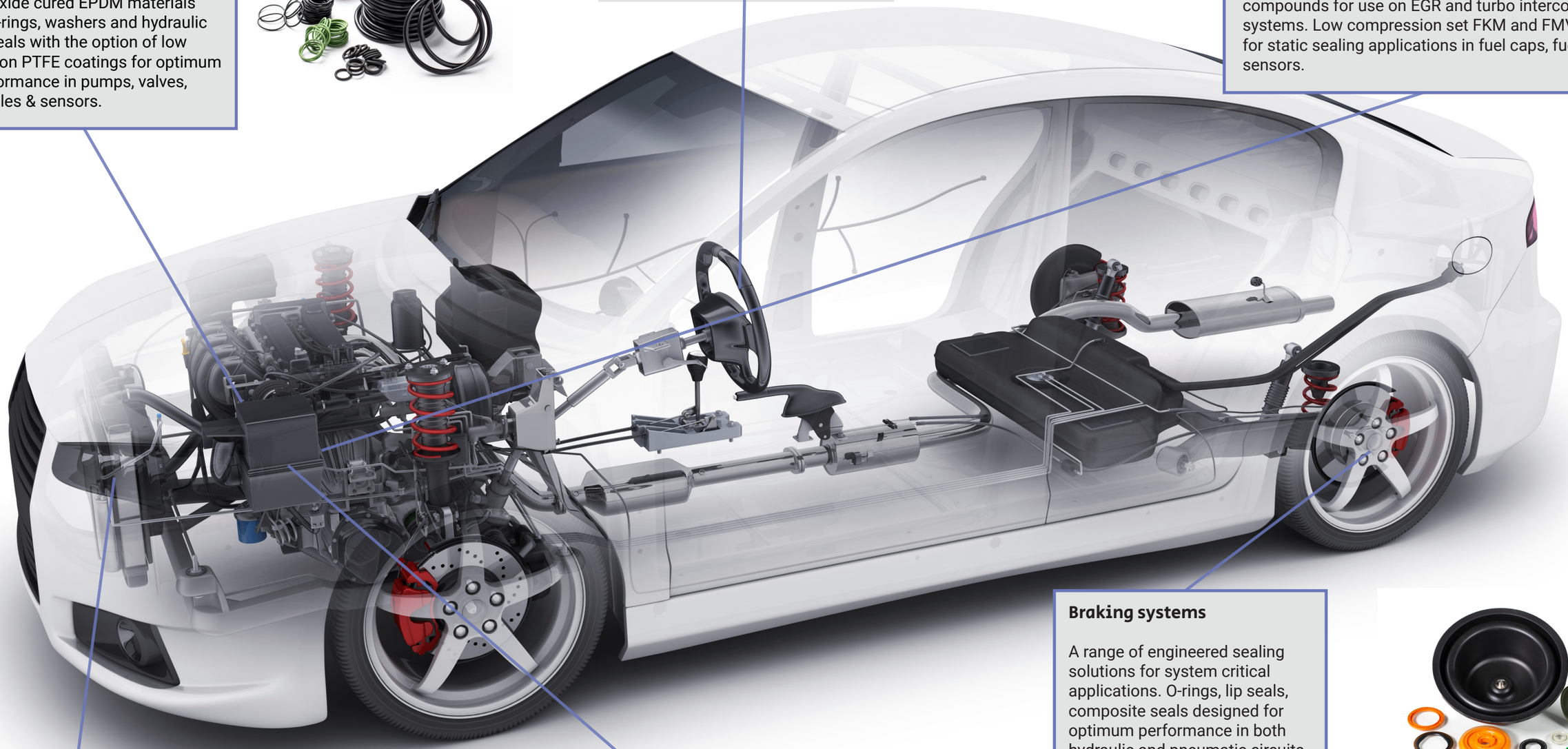


Air admission, fuel & EGR management

High or pulsating pressure fuel applications. Low/high temperature, chemically resistant FKM materials for fuel pump, filtration and injection systems.

Sealing solutions suitable for use in Selective Catalytic Reduction (SCR) exhaust gas systems of diesel powered vehicles (such as Adblue ® tank sealing).

Acidic condensate and high air temperature resistant compounds for use on EGR and turbo intercooler systems. Low compression set FKM and FMVQ seals for static sealing applications in fuel caps, fuel tank & sensors.



Braking systems

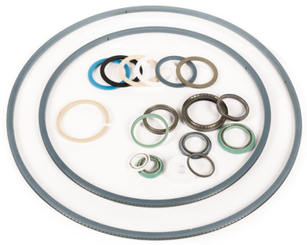
A range of engineered sealing solutions for system critical applications. O-rings, lip seals, composite seals designed for optimum performance in both hydraulic and pneumatic circuits.

Water cooling system

Low friction PTFE coated o-rings, lip seals and composite seals for thermostat controls, valves and pressure relief valves. Press in place gaskets engineered to optimise compression and groove fill for axial sealing applications in radiators.

Lubrication systems

A complete sealing solution for the lubrication system (oil pump, filter & oil sump) to include PTFE slide seal and energiser, complex gaskets, o-rings, rotary seals.



Electronics

IP rated low closure force mouldings and o-rings for under bonnet positioning sensors, connectors, sockets and wiring harnesses.
Composite elements for fixing wiring looms onto the chassis to elimate chaffing and vibration.

Specialist materials

Application Media	Temp Range °C	Materials	Material Requirements
Air (Hot)	-50°C to + 225°C (260°C short term)	Silicone (VMQ)	VW 2.8.2-L70
	-40° to + 200°C	Fluorocarbon (FKM)	VW 96309 - PN 707-2
Exhaust Gas	Up to 300°C	Perfluoroelastomer (FFFKM)	
		Polytetrafluoroethylene (PTFE)	
	Up to 650°C	Resilient metals	
Motor Oils (Mineral & Synthetic)	-40°C to + 150°C	Hydrogenated Nitrile (HNBR)	Ford WSS-M9P12-A1
	-25°C to + 150°C	Polyacrylate (ACM)	GMW3083 / VW 2.8.1 P70
	-30°C to + 160°C	Acrylate (AEM)	Ford WSD-M2D447-A3 / WSS-M9P12-A1
		Fluorocarbon (FKM)	VW 2.8.1 Grade T
Diesel Fuel	-30°C to + 100°C	Nitrile (NBR)	VW 2.8.1
	-40°C to + 150°C	Hydrogenated Nitrile (HNBR)	Ford WSS-M9P12-A1 / VW 2.8.2-S70
Biodiesel/RME & Crude/Heavy Oil	-30°C to + 200°C	Fluorocarbon (FKM)	VW 2.8.1 - C75
AdBlue ®	-50°C to + 150°C	Ethylene Propylene Diene Monomer (EPDM)	Ford WSD-M2D376-A
Petroleum blend/flex fuels	-40°C to + 200°C	Fluorocarbon (FKM) - grade dependant	VW 96309 - PN 707-2
	-70°C to + 170°C	Fluorosilicone (FMVQ)	Ford WSA-M2D401-A6
Water & Antifreeze/Corrosion inhibitor	-50°C to + 150°C	Ethylene Propylene Diene Monomer (EPDM)	Ford WSD-M2D376-A
Transmission/Steering Fluids	-40°C to + 150°C	Hydrogenated Nitrile (HNBR)	Ford WSS-M9P12-A1 / VW 2.8.2-S70
	-40°C to + 165°C	Polyacrylate (ACM)	GMW3083 / VW 2.8.1 P70
	-30°C to + 200°C	Fluorocarbon (FKM)	VW 2.8.1 - C75
Motor Oil Hot Air & Acidic condensate	-40°C to + 135°C	Epichlorohydrin (ECO)	
	-40°C to + 150°C	Hydrogenated Nitrile (HNBR)	Ford WSS-M9P12-A1 / VW 2.8.2-S70
	-40°C to + 160°C	Ethylene Acrylate (AEM)	Ford WSD - MD447
	-30°C to + 200°C	Fluorocarbon (FKM)	Ford WSA-M2D401-A6
Brake Fluids DOT4, DOT5.1	-50°C to + 150°C	Ethylene Propylene Diene Monomer (EPDM)	Ford WSD-M2D376-A
Air Brake (compressed air)	-40°C to + 100°C	Nitrile (NBR)	VW 2.8.1
	-40°C to + 150°C	Hydrogenated Nitrile (HNBR)	Ford WSS-M9P12-A1
	- 30°C to + 200°C	Fluorocarbon (FKM)	VW 2.8.1 - C75
	- 55°C to + 225°C	Silicone (VMQ)	VW 2.8.2-L70
Weathering/Ozone Resistance	-40°C to + 100°C	Polychloroprene (CR)	
	-50°C to + 150°C	Ethylene Propylene Diene Monomer (EPDM)	Ford WSD-M2D376-A
	- 55°C to + 225°C	Silicone (VMQ)	VW 2.8.2-L70
Air Conditioning Refrigerants (R744, R134a, PAG, PAO, POE oils)	-50°C to + 150°C	Ethylene Propylene Diene Monomer (EPDM)	
	-40°C to + 150°C	Hydrogenated Nitrile (HNBR)	Ford WSS-M9P12-A1 / VW 2.8.2-S70
	- 30°C to + 200°C	Fluorocarbon (FKM)	VW 2.8.1 - C75
Abrasion/Tear Resistance	- 30°C to + 100°C	Carboxylated Nitrile (NBR)	
	- 30°C to + 100°C	TPU/TPE	
Broad temperature/media & low friction	-260°C to + 320°C	Polytetrafluoroethylene (PTFE) with fillers	GMW 3059

Sealing applications

Screenwash & headlight wash system

EPDM materials suitable for use in ethanol, often with small quantities of isopropanol and ethylene glycol at temperatures as low as -50°C.

Transmission & steering

Broad range of elastomeric material grades for new generation environmental fluids.

Electronics

Range of compounds for steering fluids, oils, fuel, air switches and sensors (-60°C to +250°C).

Water cooling system

Peroxide cured EPDM material grades with low compression set and swell for high performance ethylene glycol additves; from -50°C to +140°C.

Lubrication systems

Viton and AEM material grades for a broad range of mineral oil and synthetic oils up to 200°C, providing oxidised oil resistance, heat age and condensate resistance.

Braking systems

Controlling running friction and wear on seals to maximise life (high cycle/frequency rate, dynamic seals on ABS/EBS systems).
Range of nitrile and EPDM materials suitable for oil and Dot4 systems with high UV/ozone resistant chloroprenes for dust covers and gators.

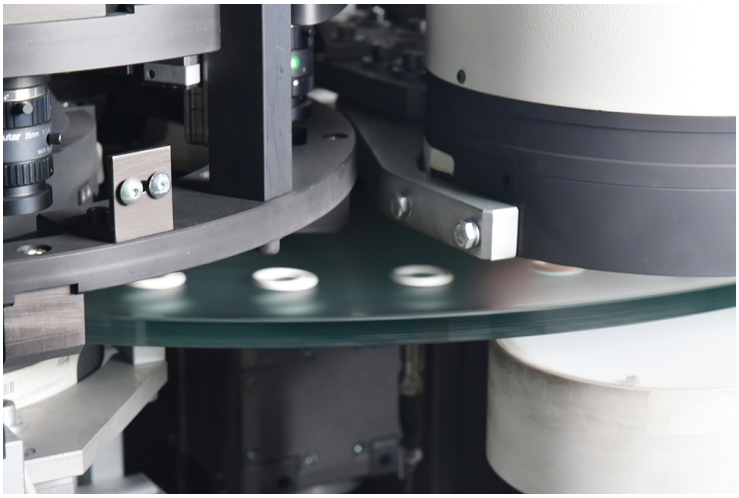
Air admission, fuel & EGR management

Advanced FKM elastomers for broad temperature requirements (-40°C to +250°C). Specially developed AEM/HNBR/EPDM materials for use in the chemically agressive urea contained within AdBlue ®

Quality Assurance

We maintain strict quality procedures at all stages of our design, development and manufacture processes. We are ISO9001:2015 and ISO14001:2015 approved, and our manufacturing facilities approved to IATF16949:2016.

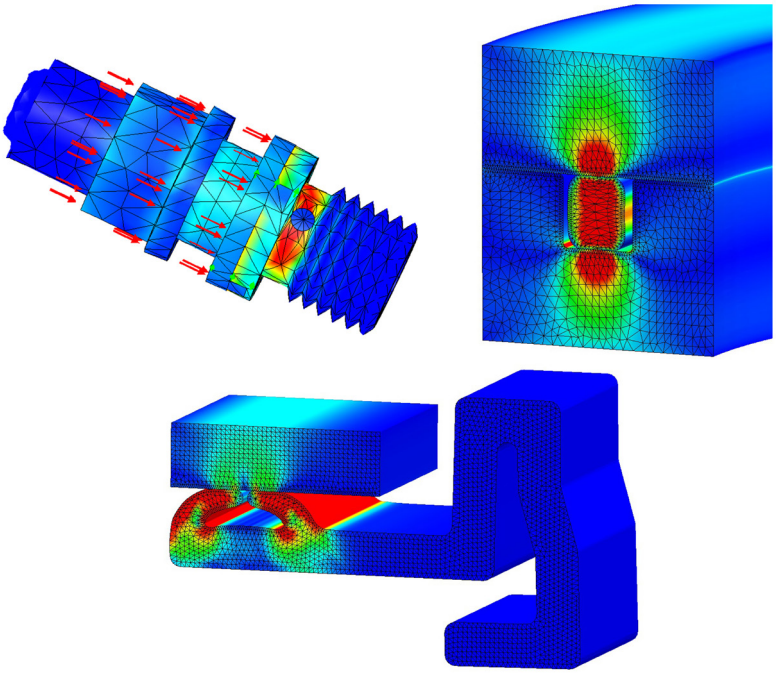
Our team of Quality Engineers and Quality Inspectors ensure that advanced product quality planning (APQP) is at the heart of our quality function.



We supply PPAP Level 3 documentation and samples as the standard quality assurance release with all of our automotive projects. CPK≥1.33 and PPK≥1.67 values are applied to critical dimensions and these values maintained for production batches with the use of 100% optical inspection on Basler and DOS machinery

Our stringent quality principles and proactive controls mean our customers have reduced claims (and associated costs), increased change control, and prevention of productivity loss and line-stops. With our manufacturing facilities we develop continuous improvements to processes such as follow up-audits, implementation of adequate prevention measures, analysis and review of similar products to prevent future issues, effective root cause analysis and preventative actions review.

Design & Development



We provide unrivalled technical and engineering support to ensure our customers benefit from the best possible seal performance at optimum cost.

We are dedicated to providing a complete design service; from initial seal geometry and profile choice, to material selection and prototyping, through to final production.

We work closely with your engineers to provide the most effective sealing solutions for each bespoke application.

Our Application Engineers utilise years of seal design experience and materials expertise, alongside technology such as 2D/3D CAD and FEA analysis programs to simulate performance before finalising each individual seal design.

Ceetak Ltd Head Office:
Fraser Road, Priory Business Park,
Bedford, MK44 3WH
Tel: 01234 832200

Ceetak Aberdeen:
Block 1, Unit 13,
Souterhead Rd,
Altens Industrial Estate,
Aberdeen, AB12 3LF
Tel: 01224 249690

Web: www.ceetak.com
Email: enquiries@ceetak.com