

microflex[®]

For the health of every car



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For the health of every car

For almost new operational conditions

The problem

The problem is rooted in chemical processes occurring in the exhaust, intake, and fuel systems, resulting in pollution, deposits, coking, and lacquering. The highly sophisticated engine technologies and exhaust standards impose a need for engine maintenance.

Key factors include

- Variation in fuel quality
- Blending of bio-components
- Stricter emission standards and increased demands on exhaust after-treatment
- More complex engine technology

Individual influences

- Stop-and-Go Traffic
- Idle times
- Short distances/driving profiles
- Hybrid operation

Negative consequences

- Increased emissions
- Higher fuel consumption
- Susceptibility to malfunctions and uneven engine running
- Increased risk of repairs and shortened lifespan

Our Solution

By utilizing our products, we significantly lower the total cost of ownership while contributing to extending the engine's lifespan. Our products stand as the ultimate problem solvers, effectively bringing engines close to their near-new operational conditions. They address various issues, thereby enhancing engine efficiency, reducing emissions, and minimizing the likelihood of costly repairs and disruptions, ensuring smoother and more reliable engine performance over a prolonged period. This holistic approach to engine care not only saves costs but also ensures engines operate at their peak for longer, aligning with both economic and environmental benefits.

Benefits

- ✓ Reduced emissions
- ✓ Lower fuel consumption
- ✓ Decreased engine wear
- ✓ Extension of engine lifespan and improvement of motor performance.



The unique effect

Our ROA² Technology

Reactive Organic Amines (ROAs) are the secret superpower behind our microflex® fuel additives, playing a crucial role in their effectiveness. These special amines are characterized by a highly electronegative nitrogen atom with a lone pair of electrons, which are highly reactive towards positive or even slightly positive parts of other molecules or ions. This attraction, like a magnet, results in outstanding cleaning performance in fuel systems. Our ROA² technology is differentiated into three cleaning levels:

ROA² Level 1

microflex® fuel additives at this level help maintain the cleanliness of the fuel system by preventing new deposits. The dispersing properties of the amines keep deposit-forming substances suspended, preventing them from settling on the components of the fuel system. Products with ROA² Level 1 are primarily for preventive use, especially for critical components like injectors or valves, proactively reducing the risk of deposit formation and ensuring a clean fuel system.



ROA² Level 2

microflex® fuel additives at this level not only prevent new deposits but also eliminate existing ones in the fuel system. The ROAs absorb the existing deposits and remove them, additionally preventing new deposits from reattaching to the surfaces. This helps maintain balance in the fuel systems.

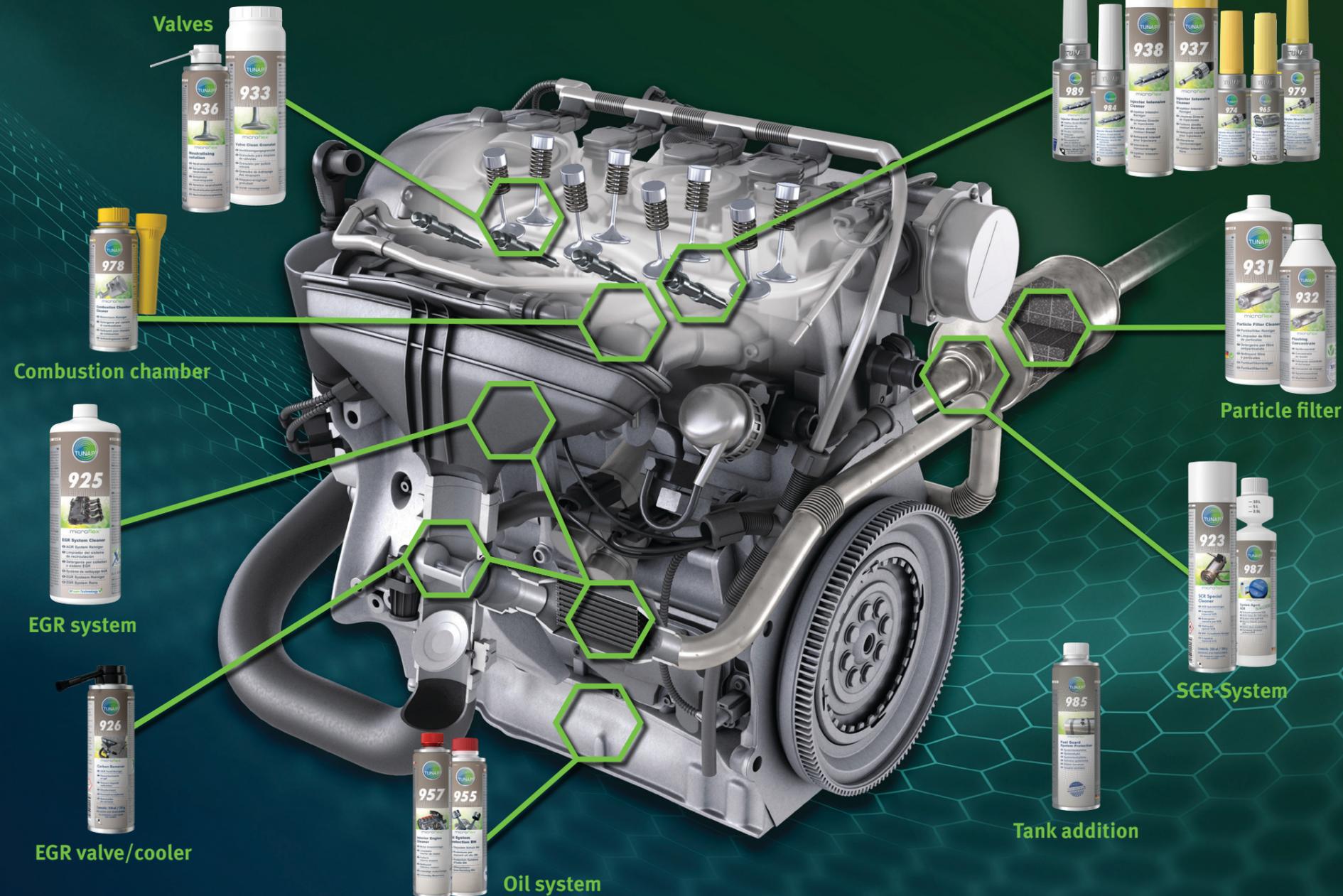


ROA² Level 3

microflex® fuel additives at this stage have the highest concentration of ROAs to achieve deep action in the fuel system. Even the most stubborn deposits are removed, restoring the optimal operating condition of the fuel system. This high level of cleaning plays a crucial role in maintaining the peak performance of every engine.



Areas of application



Injector

microflex®
974 Injector Direct Protection (petrol)

- Application area**
- For safeguarding fuel quality
 - Suitable for all petrol (ethanol) mixtures
 - For all intake manifold and direct-injection petrol engines

- Instructions**
- Simply add to the fuel tank
- Dosing**
- 100 ml: Sufficient for up to 40 l of fuel (min. 5 l of fuel)
 - 200 ml: Sufficient for up to 80 l of fuel (min. 10 l of fuel)

Contents	Article Number
200 ml	1105176



microflex®
984 Injector Direct Protection (diesel)

- Application area**
- For safeguarding fuel quality
 - Suitable for all (bio)diesel mixtures
 - For all common-rail and pump-nozzle systems

- Instructions**
- Simply add to the fuel tank
- Dosing**
- 200 ml: Sufficient for up to 80 l of fuel (min. 10 l of fuel)
 - 500 ml: Sufficient for up to 200 l of fuel (min. 20 l of fuel)

Contents	Article Number
200 ml	1106769
500 ml	1102614



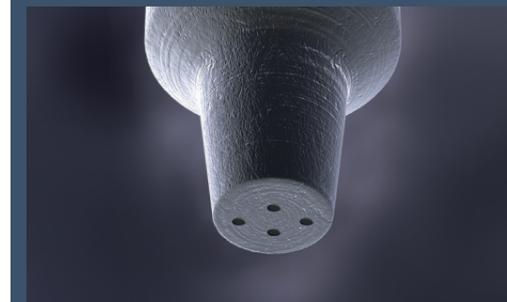
- Notice**
- Improves combustion and thus reduces particulate emissions (Euro 6)
 - Use after applying 979 Injector Direct Cleaner or 937 Injector Intensive Cleaner
 - Use regularly for best protection
 - When added to the fuel tank, the fuel is proven to remain within the DIN EN 228 fuel standard.



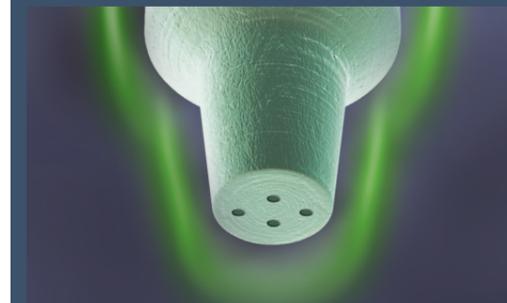
- Notice**
- Improves combustion and thus reduces particulate emissions (Euro 6)
 - Use after applying 989 Injector Direct Cleaner or 938 Injector Intensive Cleaner
 - Use regularly for best protection
 - When added to the fuel tank, the fuel is proven to remain within the DIN EN 590 fuel standard.



- Properties**
- Independently tested for effectiveness by TÜV Thüringen
 - Provides effective protection against fuel-related deposits
 - Molecularly active protective film delays recontamination
 - Maintains fuel consumption and exhaust gas values on a low level by using it regularly
 - Antioxidants delay the chemical ageing of the fuel
 - Increases the octane/cetane number to prevent „knocking“ and prevent engine damage
 - Simple and efficient one-step application thanks to state-of-the-art packaging technology



INJECTOR NOZZLE | BEFORE



INJECTOR NOZZLE | AFTER

Injector



microflex®
979 Injector Direct Cleaner (petrol)

Application area

- For all intake-manifold and direct injection petrol engines
- For safeguarding overall fuel quality
- Suitable for all (ethanol) petrol mixtures

Instructions

- Simply add to the fuel tank at every service interval
- Use the filler neck to do so

Contents	Article Number
300 ml	1106758



microflex®
989 Injector Direct Cleaner (diesel)

Application area

- For all common-rail and injector pump nozzle systems
- For safeguarding overall fuel quality
- Suitable for all (bio)diesel mixtures

Instructions

- Simply add to the fuel tank at every service interval
- Use the filler neck to do so

Contents	Article Number
300 ml	1106756
500 ml	1107647
950 ml	1106676



Dosing

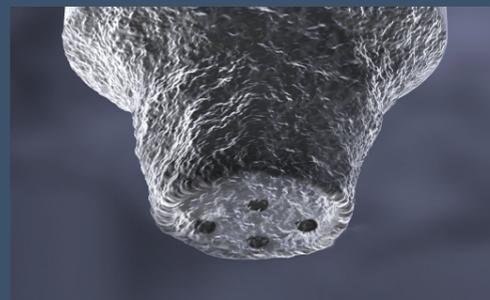
Sufficient for up to 80 l of fuel (min. 10 l of fuel).

Notice

When added to the fuel tank, the fuel is proven to remain within the DIN EN 228 fuel standard. Improves combustion and thus reduces particulate emissions (Euro 6).

Properties

- Returns fuel consumption and emission values in the presence of fuel-related soiling to the levels expected of new vehicles
- Improves combustion, thereby reducing particulate emissions (Euro 6)
- For uneven engine performance or loss of power



INJECTOR NOZZLE | BEFORE



INJECTOR NOZZLE | AFTER

Injector



microflex®
937 Injector Intensive Cleaner (petrol)

Application area

- The problem solver for intensive cleaning against stubborn deposits
- For problems with contaminated injectors (varnish and resin deposits)
- For cleaning petrol injectors
- Prior to all adjustment work and emissions tests (soot particulates)
- For diagnostics (exclusion procedure)
- For all repairs on the petrol injection system
- In cases of malfunctioning, e.g. rough idling
- In cases of excessive fuel consumption
- In cases of poor engine performance

Contents	Article Number
500 ml	1100510



microflex®
938 Injector Intensive Cleaner (diesel)

Application area

- The problem solver for intensive cleaning against stubborn deposits
- For problems with contaminated injectors (varnish and resin deposits)
- For cleaning diesel injectors
- Prior to all adjustment work and emissions tests (soot particulates)
- For diagnostics (exclusion procedure)
- For all repairs on the diesel injection system
- In cases of malfunctioning, e.g. rough idling
- In cases of excessive fuel consumption
- In cases of poor engine performance

Contents	Article Number
500 ml	1102349
5 l	1103400



General information

Instructions

Special tool TUNAP 13310 ICM 2020 must be used to allow the system to be cleaned without dismantling the injectors. Refer to the operating instructions before use.



Special tool TUNAP 13310 ICM 2020

Dosing

For one passenger vehicle (up to 4 cylinders), 1 can of 937/938 Injector Intensive Cleaning is required. 6 cylinder and 8 cylinder engines require 2 cans. 10-12 cylinder engines require 3 cans

Notice

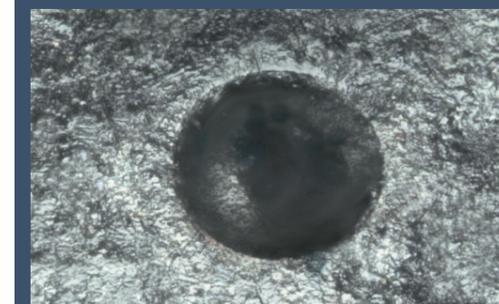
- Only use 937/938 Injector Intensive Cleaner with the ICM 2020 (1400850)
- After using ICM 2020 (1400850) prevent high level of recontamination with 979/989
- Regularly using 974/984 Injector Direct Protection after cleaning also protects against recontamination to a certain level

Properties

- Maximum cleaning performance for almost new operational conditions
- Enables the injectors to be cleaned directly
- The injectors do not need to be removed before use
- Breaks down and removes resin residues and deposits
- Excellent cleaning performance around the inlet valve of aspirated engines
- Ensures an even injection spray, smooth idling and reduced fuel consumption
- Reduces emission values compared to when the system is not cleaned



INJECTOR INJECTION HOLE | BEFORE



INJECTOR INJECTION HOLE | AFTER

Injector



microflex®
965 System Agent Hybrid (petrol)

Application area

- For all hybrid vehicles with a petrol engine
- For cleaning the injection system on all intake-manifold and direct-injection petrol engines
- For reducing the risk of engine damage caused by LSPI
- Suitable for all petrol (ethanol) mixtures

Instructions

- Simply add to the tank
- Use regularly for effective protection

Dosing:

One can is sufficient for up to 80 l of fuel (min. 10 l of fuel).

Notice

In hybrid vehicles, the system agent should be added with each refilling of the fuel tank. For all other petrol vehicles, the system agent should be added at regular intervals every 5,000 km. (depending on fuel quality)

Contents	Article Number
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200 ml	1106881
--------	---------

Properties

- Regular addition optimally stabilises and protects fuel for the longer service life typical of hybrids
- Reliably protects the entire fuel system against corrosion
- Regular addition prevents the formation of deposits in the fuel system
- Cleans the combustion chamber and injection system
- Reduces the risk of engine damage caused by LSPI
- Regular addition reduces fuel consumption
- Can reduce emissions to new-car levels



SPRAY PATTERN | BEFORE



SPRAY PATTERN | AFTER

Combustion chamber



microflex®
978 Combustion Chamber Cleaner (petrol)

Application area

- Suitable for all ethanol/petrol mixtures with direct injection
- Specially prevents engine damage caused by LSPI (Low Speed Pre-Ignition)

Instructions

- Simply add to the fuel tank
- Use the filler neck
- Use regularly for effective protection

Dosing

Sufficient for up to 60 l of fuel (min. 10 l of fuel).

Contents	Article Number
----------	----------------

200 ml	1102326
--------	---------

Properties

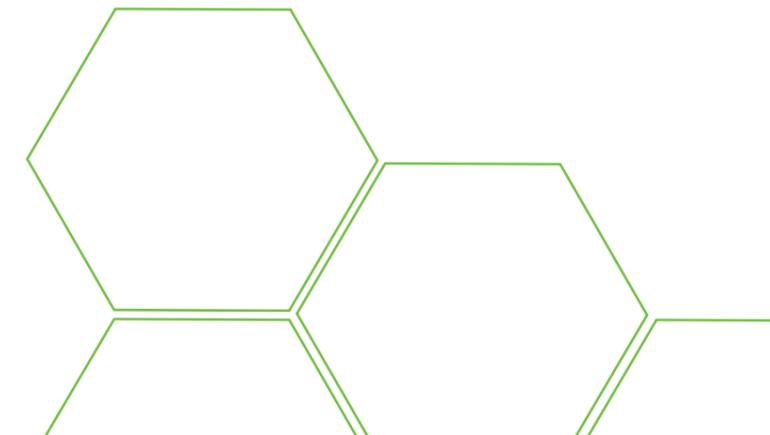
- Removes fuel-related deposits from the combustion chamber and piston head
- Reduces the risk of the engine being damaged by LSPI



PISTON | BEFORE



PISTON | AFTER



Fuel system



microflex® 985 Fuel Guard System Protection (diesel)

Application area

- Diesel engines
- Diesel systems in ships
- Standing units
- Home tank systems with a long storage time

Instructions

If organic contaminants are present in the fuel systems, clean thoroughly and use a shock dosage of the product. Use regularly to prevent the formation of bacteria, fungi and germs in the fuel.

Dosing

Preventative use:

- 500 ml for 2,000 l
- 5 l for 20,000 l

Shock dosing:

- 500 ml for 250 l
- 5 l for 2,500 l

Contents Article Number

500 ml	1106152
5 l	1106210

Properties

- Reliably exterminates biological contaminants
- Prevents recontamination
- Tested according to ASTM E 1259-10 and EN 15457:2014-11
- Stabilises fuel quality using antioxidants
- Ensures optimum engine performance thanks to cetane booster
- Protects metallic components in the fuel system using corrosion protection inhibitors
- Low toxicity: Contains no carcinogenic or mutagenic ingredients and no ingredients that are toxic for reproduction
- Patented formula
- No biocide



BEFORE



AFTER

Oil system



microflex® 955 Oil System Protection BN (engine oil)

Application area

- Additional protection for the engine
- Specially developed for heavy used vehicles e.g. trailer mode

Instructions

Shake can well before use. Add the contents to the engine oil at operating temperature. Do not dose more than 20 % of the oil filling. Do not exceed the maximum oil level.

Dosing

- 300 ml is sufficient for 5 l of oil
- 950 ml is sufficient for 15 l of oil

Notice

- Not suitable for manual/automatic gearboxes

Contents Article Number

300 ml	1102676
950 ml	1106201



Properties

- Improves the oil's lubricity
- Reduces noise and fuel consumption
- Improves the oil's effectiveness at protecting against corrosion and oxidation
- Provides dry and emergency lubrication
- Full effectiveness achieved after approximately 1,000 km



BEFORE



AFTER

Oil system



microflex®
957 Engine Interior Cleaner (engine oil)

Application area

- In case of oil sludge deposits
- In case of a loss of compression from the piston rings
- In the case of hydraulic valve lifters knocking
- When changing oil to ensure that the new engine oil is not contaminated by any residues of used oil

Instructions

- Add cleaner to the engine oil prior to every oil change. Adhere to the minimum oil level. Allow the engine to run at idle speed for a maximum of 20 minutes with the vehicle at a standstill
- Change the oil and filter immediately afterwards

Dosing

- 200 ml: Sufficient for up to 4 l of engine oil
- 400 ml: Sufficient for up to 6 l of engine oil
- 950 ml: Sufficient for up to 15 l of engine oil

Notice

- Caution! Please do not overdose
- Not suitable for use in motorcycles with wet clutches

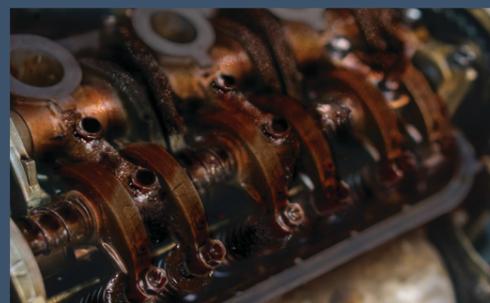
Contents Article Number

200 ml	1102513
400 ml	1102519
950 ml	1102591



Properties

- Free of VOCs and volatile solvents
- Contains low-viscosity detergents to deliver outstanding cleaning results
- Removes oil sludge deposits from the engine oil system
- Protects the engine from being damaged as a result of blocked oil channels and bore holes
- Contains additives to lubricate components during the cleaning process
- Does not contain any chlorine, phosphates, nitrates or heavy metals
- Can be disposed of with the used oil



BEFORE



AFTER

Exhaust/Intake system



microflex®
931 Particle Filter Cleaner
932 Flushing Concentrate

Application area

- For loss of performance or faults due to an overloaded particulate filter
- For restoring the absorption capacity of overloaded particulate filters
- As a preventative action in case of an unfavourable driving profile

Instructions

Spray the 931 Particle Filter Cleaner through the best access point e.g. sensor inlet, with the special probe in the direction of the particulate filter. Rinse with 932 Flushing Concentrate after cleaning. Close the probe opening and allow the engine to run at idle speed for 15 minutes. Then perform the regeneration.

Notice

- Refer to Service Information SI 931 before use
- Increased steam formation can occur during the regeneration process, caused by the evaporation of the water-based product



Fill cleaner into the pressure cup of the gun (Article Number 1400892).

Contents Article Number

931 - 1 l	1101489
932 - 500 ml	1101488

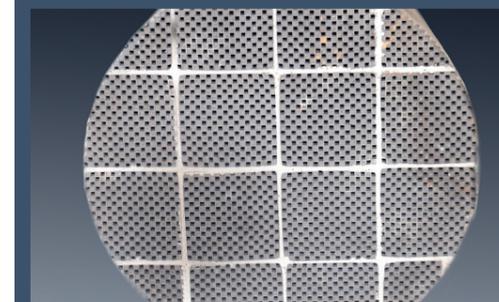


Properties

- Particulate filter does not have to be dismantled for cleaning
- Cleans build-up of ash or soot in the particulate filter
- Neutral, ash-free formulation
- Dissolves carbon deposits in particulate filters
- Non-flammable and metal-free
- For removing deposits containing carbon from oxidation catalytic converters
- Simple and reliable application
- Not a hazardous good
- No hazard labelling (hazard symbols, hazard warnings)



BEFORE



AFTER

Exhaust/Intake system



microflex® 923 SCR Special Cleaner

Application area

For use in the event of crystal formation in urea dosing systems and SCR catalytic converters. This occurs when the required temperatures for complete transformation into ammonia are not reached.

Instructions

Remove the parts to be cleaned if required and spray liberally. Allow the product to take effect for several minutes and dry with compressed air if required.

Notice

To prevent the crystals forming again, we recommend using Additive 987 on a regular basis.



SCR Probe - 1107263

Contents	Article Number
300 ml	1107162

Properties

- Cleans urea dosing systems, injectors and SCR catalysts with limited performance due to crystal formation
- The probe makes it easy to access hard-to-reach parts



BEFORE



AFTER

Exhaust/Intake system



microflex® 987 System Agent SCR

Application area

For the preventative use and in case of first signs of crystal formation in urea dosing systems and SCR catalytic converters. This occurs when the required temperatures for complete transformation into ammonia are not reached.

Instructions

Squeeze the dispenser bottle to fill the dosing area of the bottle with the required amount of system agent. Add the measured quantity to the canister/bottle containing the urea solution. Then add the mixture to the urea tank. Add the system agent regularly, at least every time the urea tank is filled.

Dosing

- For measuring the dosage, see the scale on the dosing area of the bottle
- One bottle of SCR system agent (250 ml) is enough for 100 l of urea fluid, 5 l canister is good for 2,000 l (Dosage 1:400)
- The specified dosage should not be exceeded

Contents	Article Number
250 ml	1106698
5 l	1106925

Properties

- Protects urea dosing systems and SCR catalytic converters from crystal formation
- Cleans urea dosing systems and SCR catalytic converters with limited performance due to crystal formation
- Easy to dose
- Patent pending
- SGS tested to stay within the norm ISO 22241
- APL tested



BEFORE



AFTER

Exhaust/Intake system



microflex® 933 Valve Clean Granulate 936 Neutralisation Solution

Application area

- For cleaning intake valves and intake ducts
- For cleaning outlet valves and outlet ducts
- After cleaning the intake valves and intake ducts with 933 Valve Cleaning Granulate use 936 Neutralisation Solution in order to dissolve the remaining particulates

Instructions

Refer to SI 933 before use!

Use with TUNAP PRO Valve Clean System cleaning tool. Spray 936 Neutralisation Solution into the intake ducts in the direction of the valves. Then cover the intake ducts with a cloth and extract or blow out liquid.

Dosing

- For 1 vehicle (4 cylinder), 2 cans of 933 Valve Clean Granulate are required
- 1 can of 936 Neutralisation Solution (200 ml) is sufficient for 1 vehicle

Notice

After cleaning we recommend the regular use of 974 Injector Direct Protection (petrol) or 984 Injector Direct Protection (diesel).



TUNAP PRO Valve Clean System

Contents Article Number

933 - 1 l	1103683
936 - 200 ml	1107012
13400 TUNAP PRO Valve Clean System	1401038

Properties

- Effective cleaning thanks to the granulate adjusted to the type of contamination
- Specific grain size — ensures consistent product quality
- Specific geometry — no sharp-edged or compressing properties, therefore no abrasion, wear or damage to the respective surface structure
- Simple and reliable application — with 936 Neutralisation Solution residual particles of the granulate will be dissolved
- Not a hazardous good
- No hazard labelling (hazard symbols, hazard warnings)



BEFORE



AFTER

AIR CONDITIONING STINKS. CLEAN IT NOW!

airco well® for a hygienically clean air conditioning system in accordance with VDI/ZDK guideline 6032.

aircowell.com

airco
well®



Exhaust/Intake system



microflex® 925 EGR System Cleaner

Application area

Ideal for cleaning larger components of the intake and exhaust gas system such as intake manifolds and EGR cooler.

Instructions

Always refer to Service Information SI 925 before application. Only to be applied with the EGR Pressure Cup Spray Gun!

Notice

- Only use outside or in well ventilated rooms
- Wear protective gloves/protective clothing/eye protection/face protection
- Caution! Only to be used with the TUNAP Original tool 19310 EGR Pressure Cup Spray Gun.



19310 EGR Pressure Cup Spray Gun
(Article Number 1400345)

Contents

1 l

Article Number

1100400



Properties

- Excellent cleaning effect for residues containing carbon
- No solvents
- Non-combustible
- Specially developed XFOAM TECHNOLOGY



INTAKE MANIFOLD | BEFORE



INTAKE MANIFOLD | AFTER

Exhaust/Intake system



microflex® 926 Carbon Remover

Application area

Ideal for cleaning smaller components of the intake and exhaust gas system such as EGR valves.

Instructions

Remove large deposits beforehand using a suitable tool. Completely coat the surfaces to be cleaned with the cleaning gel. Allow the gel to soak in for about 10 minutes. Then manually remove the loosened dirt with the integrated brush. Finally, rinse the cleaned area or component with plenty of water and dry with compressed air. Repeat the process if necessary.

Notice:

Always refer to Service Information SI 926 before application.

Contents

200 ml

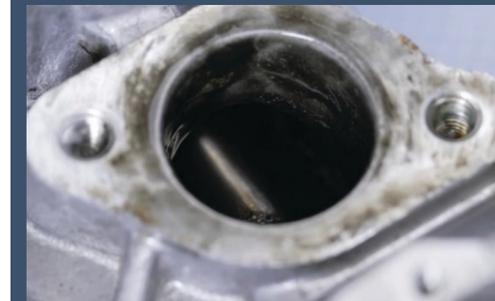
Article Number

1106977



Properties

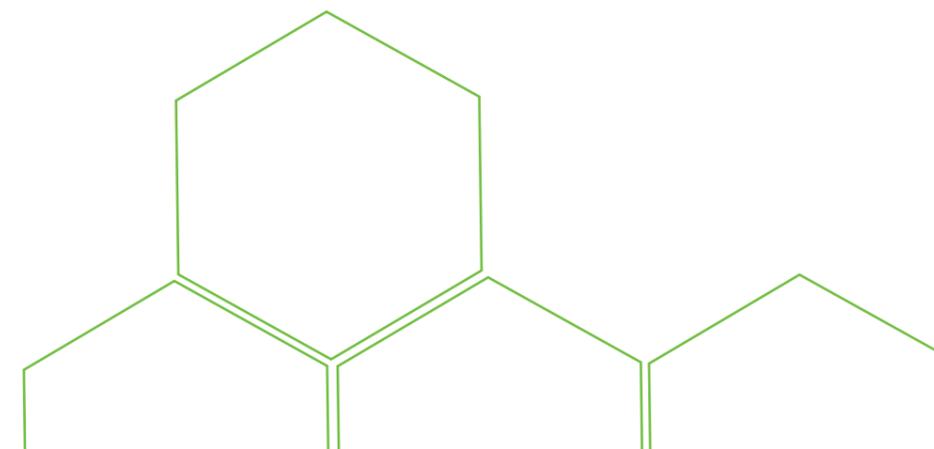
- Excellent cleaning effect for residues containing carbon
- No solvents
- Non-combustible
- Specially developed XGEL TECHNOLOGY for effective cleaning



EGR VALVE | BEFORE



EGR VALVE | AFTER



TUNAP Automotive Workshop Chemicals

Our solutions at a glance

Symptom	Cause/Remedy	974 ¹	984 ¹	979	989	937/ 938 ²	965	978 ³	985	955	957	931/ 932	923	987	933/ 936	925	926	
Loss of performance	Check inlet valves, clean if necessary	🛡️	🛡️	🛡️	🛡️										🛡️			
	Check intake manifold, clean if necessary	🛡️	🛡️	🛡️	🛡️											🛡️		
	Check EGR valve, clean if necessary	🛡️	🛡️	🛡️	🛡️												🛡️	
	Check EGR cooler, clean if necessary	🛡️	🛡️	🛡️	🛡️											🛡️		
	Check turbocharger VTG, clean if necessary	🛡️	🛡️	🛡️	🛡️												🛡️	
	Check injectors (injection quantity, return flow and balance correction), clean if necessary	🛡️	🛡️	🛡️	🛡️	🛡️												
	Check loading condition/differential pressure of the particle filter, clean if necessary	🛡️	🛡️	🛡️	🛡️								🛡️					
Increased fuel consumption	Check injectors (injection quantity, return flow and balance correction), clean if necessary	🛡️	🛡️	🛡️	🛡️	🛡️												
	Check inlet valves, clean if necessary	🛡️	🛡️	🛡️	🛡️										🛡️			
	Check intake manifold, clean if necessary	🛡️	🛡️	🛡️	🛡️											🛡️		
	(Petrol) Check EGR valve, clean if necessary	🛡️		🛡️													🛡️	

Symptom	Cause/Remedy	974 ¹	984 ¹	979	989	937/ 938 ²	965	978 ³	985	955	957	931/ 932	923	987	933/ 936	925	926
Malfunction indicator light (MIL) lights up (see error codes)	Check EGR valve, clean if necessary	🛡️	🛡️	🛡️	🛡️												🛡️
	Check intake manifold, clean if necessary	🛡️	🛡️	🛡️	🛡️												🛡️
	Check inlet valves, clean if necessary	🛡️	🛡️	🛡️	🛡️										🛡️		
	Check loading condition/differential pressure of the particle filter, clean if necessary	🛡️	🛡️	🛡️	🛡️								🛡️				
Loud diesel rattle	Check injectors (injection quantity, return flow and balance correction), clean if necessary		🛡️		🛡️	🛡️											
	Check injectors (injection quantity, return flow and balance correction), clean if necessary	🛡️	🛡️	🛡️	🛡️	🛡️											
Rough idle	Check EGR valve, clean if necessary	🛡️	🛡️	🛡️	🛡️												🛡️
	Check inlet valves, clean if necessary	🛡️	🛡️	🛡️	🛡️										🛡️		
	Check intake manifold, clean if necessary	🛡️	🛡️	🛡️	🛡️											🛡️	
	(Petrol) Check direct injection piston crown for deposits, clean if necessary	🛡️	🛡️	🛡️			🛡️	🛡️									

🛡️ Preventive 🛡️ Problem solver

🛡️ Preventive 🛡️ Problem solver

¹ Regular, preventive use after successful cleaning with 979/989 or 937/938.

² If cleaning with 979/989 is not successful.

³ If the combustion chamber is very dirty, use the product two tank fillings in succession. Then regularly every 5,000 km as a preventive measure.

Symptom	Cause/Remedy	974 ¹	984 ¹	979	989	937/ 938 ²	965	978 ³	985	955	957	931/ 932	923	987	933/ 936	925	926
Poor emissions values	Check injectors (injection quantity, return flow and balance correction), clean if necessary	🛡️	🛡️	✅	✅	✅											
	Check EGR valve, clean if necessary	🛡️	🛡️	🛡️	🛡️												✅
	Check turbocharger VTG, clean if necessary	🛡️	🛡️	🛡️	🛡️												✅
	Check oil change interval, clean oil system if necessary										✅						
Engine dies at idle / stutters when changing load	Check EGR valve, clean if necessary	🛡️	🛡️	🛡️	🛡️												✅
Misfiring or loss of compression of individual cylinders	Check inlet valves, clean if necessary	🛡️	🛡️	🛡️	🛡️										✅		
	Check intake manifold, clean if necessary	🛡️	🛡️	🛡️	🛡️											✅	
	(Petrol) Check direct injection piston crown for deposits, clean if necessary						🛡️	✅									
Jerking when changing gear (DSG and automatic transmission)	Check inlet valves, clean if necessary	🛡️	🛡️	🛡️	🛡️										✅		
	Check intake manifold, clean if necessary	🛡️	🛡️	🛡️	🛡️											✅	
	Check turbocharger VTG, clean if necessary	🛡️	🛡️	🛡️	🛡️												✅

🛡️ Preventive ✅ Problem solver

¹ Regular, preventive use after successful cleaning with 979/989 or 937/938.

² If cleaning with 979/989 is not successful.

³ If the combustion chamber is very dirty, use the product two tank fillings in succession. Then regularly every 5,000 km as a preventive measure.

Symptom	Cause/Remedy	974 ¹	984 ¹	979	989	937/ 938 ²	965	978 ³	985	955	957	931/ 932	923	987	933/ 936	925	926
Particle filter lights up or blinks	Check loading status/differential pressure of the particle filter, clean if necessary	🛡️	🛡️	🛡️	🛡️							✅					
Particle filter repeatedly clogs quickly or often regeneration	Check injectors (injection quantity, return flow and balance correction), clean if necessary	🛡️	🛡️	✅	✅	✅						✅					
	Check EGR valve, clean if necessary		🛡️		🛡️							✅					✅
	Check driving profile, prevent if necessary with MP 184		🛡️		🛡️	✅						✅					
Heavy oil mud formation in cylinder head/valve operation	Check oil change interval, clean oil system if necessary		🛡️		🛡️						✅						
Clogged fuel system	Bacteria/yeasts/fungi form sludgy deposits in the diesel. Remove the sludge and clean the fuel system with 985.								✅								
Crystallization in the SCR dosing system	Is formed when the required temperature for complete conversion to ammonia is not reached												✅	🛡️			🛡️
Hybrid vehicles	Long service life for hybrid vehicles, unsuitable driving profile																

🛡️ Preventive ✅ Problem solver

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Get in touch with us.

TUNAP GmbH & Co. KG
Bürgermeister-Seidl-Straße 2
D-82515 Wolfratshausen

Phone +49 (0) 81 71 / 16 00 - 0
info@tunap.com

[TUNAP.com](https://www.tunap.com)