

NEUTRAL CLEANERS  
ALKALINE CLEANERS  
HYDROCARBON CLEANERS  
SPECIAL CLEANERS AND ADDITIVES

# INDUSTRIAL CLEANERS



**PETROFER**  
industrial oils and chemicals

## INTRODUCTION

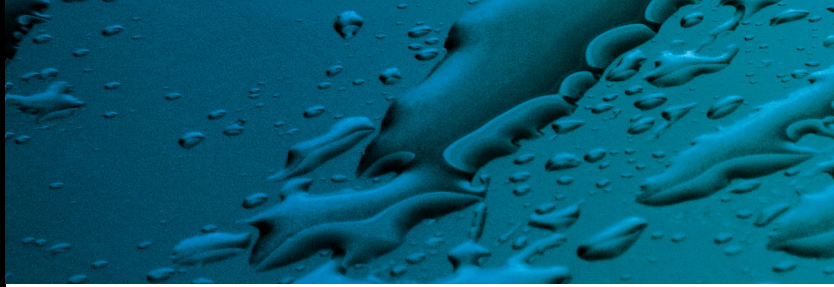
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PETROFER offers a comprehensive range of industrial cleaners for the cleaning of most surfaces and materials and suitable for all types of cleaning processes. PETROFER can offer technology whether as an individual product or as a tailor made system solution for production processes. All industrial cleaners from PETROFER enable a long service life with low maintenance. They are developed from the latest research and technology findings. The industrial cleaners take into account ecology and occupational safety, while meeting the highest requirements of modern cleaning systems.

Our customer partnership approach in industrial cleaning has helped our clients with:

- removal of formaldehyde biocide
- products with very good corrosion prevention
- many industrial cleaners are multi-metal compatible
- approvals from the field of robotics
- products suitable for high pressure and ultrasonic applications

PETROFER's product range of cleaners provides our customers with a complete portfolio for the whole range of industrial cleaning processes. Advantages that benefit you and your company.



## OUR PRODUCT RANGE

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### NEUTRAL CLEANERS

Neutral cleaners of our FEROCLEAN N series are used in process lines for intermediate and final cleaning of metal and other surfaces. They are characterised by excellent demulsification behaviour. This guarantees optimum oil separation to extend the cleaner life while providing consistent component cleanliness. This cleaner technology is the method of choice for heat treatment processes. Chemistry is available for hot and cold washing applications.

### ALKALINE CLEANERS

The FEROCLEAN A series cleaner from PETROFER's alkaline range are used wherever high purity of the component surface is required, for example before electroplating or enamelling. For highly alkaline products, the use in multi-zone systems with a rinse is recommended.

### HYDROCARBON CLEANERS

As an alternative to halogenated hydrocarbon cleaners PETROFER offers the FEROCLEAN L series: odourless, hydrocarbon based cleaners for degreasing. These do not contain chlorine, fluorine or aromatic compounds.

### SPECIAL CLEANERS AND ADDITIVES

In addition to the numerous FEROCLEAN products mentioned before, PETROFER offers special cleaners as individual products or as customised system solutions for the entire manufacturing process. There are also a range of additives to customise the process further as required.

*“formaldehyde and boron free,  
long-life and pH stable”*



## YOUR BENEFITS

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### REDUCTION OF TOTAL COST OF OWNERSHIP

- lower capital investment: one versatile product for all processes and to cover all cleaning specifications results in reduced plant purchase costs
- flexible products available: for spray, high pressure, immersion and ultrasonic applications and suitable across many metals and materials
- higher system availability: trouble free, low foaming operation enables optimised production schedules. This reduces the addition of expensive defoamers and additives.
- reduced concentrate consumption and disposal costs due to long bath life
- no additional rinsing steps for subsequent processes

### HIGHER PROCESS EFFICIENCY AND RELIABILITY

- modern cleaning agents reduce maintenance downtime
- neutral cleaners avoid diffusion inhibiting layers. Therefore they are suitable for heat treatment, as pre-cleaning and intermediate cleaners in hardening shops
- good demulsifying behaviour, especially against hardening and cutting oils maintains wash efficiency. In most cases ultra-filtration is possible
- simple to use and maintain, with suitability across different water qualities
- many approvals from OEMs and machine manufacturers
- good temporary corrosion prevention properties and therefore problem free intermediate storage of components

### IMPROVEMENT OF THE ENVIRONMENTAL BALANCE

- high recyclability and reusability potential from membrane or evaporator waste treatment
- modern products reduce effluent volumes and disposal costs
- problem free waste water treatment due to the absence of hard complexing agents
- legal and environmental conformity: formaldehyde, boron, silicate and nitrite free cleaners available
- solvent cleaners are free of chlorinated hydrocarbons and aromatics



Forging automotive parts crank shaft, washed with our cleaners

## APPLICATION EXPERTISE

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### INDUSTRIAL SECTORS USING OUR PRODUCTS

- aerospace, defence and marine
- agricultural and construction equipment with supply chain
- automotive and components supply chain
- casting and forging
- consumer, electronics, white and brown goods
- heat treatment
- machine tool OEM's
- medical equipment
- mining, mineral and chemical industries
- paper/tissue/board production and conversion
- power generation
- pressings, extrusion, hydroforming and fasteners
- public transportation

### APPLICATION EXAMPLES

FEROCLEAN A types are used to remove heavy soiling like greases and pastes prior to machining, or to de-phosphate steel components prior to the next process. FEROCLEAN N types are free from inorganic salts with very good corrosion prevention and demulsifying properties. They are used to wash components between machining operations and reduce carry over of cutting fluids between processes. FEROCLEAN S types are based on fruit acid to descale washing machines and components of water salts and calcium residues.

### HIGHLIGHT PROJECT

PETROFER developed a neutral cleaner in the FEROCLEAN N series for the automotive industry. The product cleans engine parts such as crankcases and cylinder heads without staining, and is used at high pressure while cold. This cleaner has been introduced as a worldwide group standard of a leading automotive manufacturer.



Cleaning process in an industrial washing machine

PETROFER is a system supplier and offers perfectly coordinated chemistry along the entire production process route.

1

HEAT TREATMENT

2

DIE-CASTING AND FORGING

3

FIRE RESISTANT HYDRAULIC FLUIDS

4

METALWORKING FLUIDS

5

METAL FORMING LUBRICANTS

6

INDUSTRIAL LUBRICANTS

7

INDUSTRIAL CLEANERS

8

RUST PREVENTATIVES

9

PAPER CHEMICALS

10

SUPPORT

For further information please visit or contact through our website  
[www.petrofer.com](http://www.petrofer.com)



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