

MAKING GREEN WORK.





Always on the safe side. **VOC-free cleaning** 

> VOC free!



## MAKING GREEN WORK.

#### Thinking holistically, acting sustainably

Sustainability in our bio-chem products and technologies is our way of fulfilling the needs of the people of today, and of using resources in such a way that future generations will also be able to profit from them.

"For us, sustainability means assuming responsibility, for our entrepreneurial and social actions as well as for all environmental concerns." Ulrich Berens, Chairman of the supervisory board

# VOC Directive - Solvent reduction in surface cleaning



VOC stands for Volatile Organic Compounds. VOC are pollutive and may therefore harm human health. The Directive 1999/13/CE on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations aims at considerably reducing the use of solvents and VOC emissions into the environment, thereby protecting human health. This solvent regulation concerns for instance activities such as surface cleaning. Surface cleaning plants with a solvent consumption of more than one metric ton per year have to be operated at state-of-the-art level (closed facilities) and have to observe diffuse and collected emission limits. These limits do not apply to cleaning agents with a solvent content of under 20 %. For your information we have marked the bio-chem cleaning agents for surface cleaning with a solvent content of under 20 % in this catalogue as **VOC-reduced**, and those without solvents as **VOC-free**. In plenty of applications solvents can be replaced completely by water-based bio-chem products. For many volatile solvents such as acetone or ethyl acetate, bio-chem FT 200 and bio-chem GS 200 are an alternative for you to meet the requirements of the reduction scheme.

#### **Nature Boost - Green Corner**

#### Nature Boost is the way to successful cleaning in the industry



Nature Boost is an innovative additive produced from renewable raw materials. This unique additive stands out for its excellent dissolving powers, especially with strong greases, oils, adhesives and also paint and inks. What makes the efficacy of Nature Boost even more impressive is that it is also non-combustible, VOC-free, not subject to mandatory labelling and renewable.



Optimal performance, employee protection, and reduction of environmental impacts – that's what Nature Boost stands for.

#### Clean Blue by Bio-Circle

In times of increasing energy costs and limited resources, making efficient use of energy is becoming more and more important in all sectors. The bio-chem low-temperature cleaners have been developed for mechanical applications. They save energy and remove strong contaminations vigorously even at ambient temperature. The cleaners can be used flexibly in all temperature ranges, parts can be measured in a timely manner, fresh water consumption is reduced, and there is less danger of cleaner residues drying on the parts.







### bio-chem cleaner

#### NATURE BOOST - Eliminate persistent contaminations safely.

# LEANBLUE

## CB 100, CB 100 F, CB 100 Alu

bio-chem CB 100 is the cleaner that benefits from the power of Nature. The water-based cleaner with its pleasant scent is produced from renewable raw materials derived form recycled products. These natural active substances provide the cleaner with its strong dissolving powers. The surface remains unaffected, and the original finish is restored.

- VOC-free environmentally compatible and user-friendly
- Water-based
- Not subject to mandatory labelling in accordance with the European Directive, reduces hazardous substances
- Virtually residue-free



**CB 100 F** 

VOC

Foamless cleaner for mechanical and manual cleaning. **Optimal cleaning results also** at ambient temperature.



**A20085** 200 L drum

A03085 30 L jerrycan

A10085 1000 L IBC





**CB 100 Alu** 

Equipped with a special aluminium formula that protects aluminium and brass. With efficient corrosion protection. Active at ambient temperature and when heated.

- A50049 500 mL PET bottle with trigger Trading unit: 20 x 500 mL (1 box)
- **A01049** 10 L jerrycan
- **A03049** 30 L jerrycan **A20049** 200 L drum
- **11) A10049** 1000 L IBC

A50025 500 mL PET bottle with trigger Trading unit: 20 x 500 mL (1 box)

**CB 100** Universally applicable in the

manual cleaning of

strong contaminations

in all fields of the industry.

A substitute for paraffin

in cleaning.

**A01025** 10 L jerrycan

**A03025** 30 L jerrycan **A20025** 200 L drum

A10025 1000 L IBC



Tip: Pre soak in a Bio Circle Clean Box.

#### **GS 200**

bio-chem GS200 removes cracking, persistent greases, anti-rust waxes, bitumen, polymers, adhesive residues, sealing compounds (also silicone), rubber and many more in a natural way. The extremely economical cleaner operates on the basis of renewable raw materials and is the effective alternative to solvents containing VOC and/ or irritant substances.







- VOC-free
- Tigh flash point (>100°C/212°F) enhances safety during application
- Not subject to mandatory labelling in accordance with EC directives



- A50065 500 mL PET bottle with trigger Trading unit: 20 x 500 mL (1 box)
- **A01065** 10 L jerrycan
  - **A03065** 30 L jerrycan
- **A20065** 200 L drum
- 10065 1000 L IBC





# **Easy cleaning - FOR CLEAN**



# high cleaning performance • can be used anywhere • safe to use • helps reduce environmental stress

The new cleaners of the BIO-CIRCLE FOR CLEAN range stand for powerful and environmentally compatible cleaning. The products solve the cleaning tasks of industrial cleaning and can be used in manual as well as in mechanical cleaning

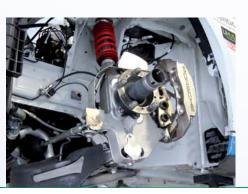
They have been developed on the basis of the latest raw material trends, they work effectively at low temperatures, and of course they also don't require any labelling in accordance with the new CLP Regulation. The performance package is perfected by the universal applicability of these innovative cleaners.



Powerful against mineral oils, vegetable oils and greases, cooling lubricants and cutting oils, protein incrustations, and soot.  Highly concentrated, individual dilution ratios guarantee customized cleaning solutions for each user's application  Powerful against mineral oils, volubelling required in accordance with the CLP Regulation (see table)  No labelling required in accordance with the CLP Regulation (see table)  Replace of the consumption of the consumption of the compact of the consumption of t	high	safe	can be used	helps reduce
	cleaning performance	to use	anywhere	environmental stress
- also when spraying	mineral oils, vegetable oils and greases, cooling lubricants and cutting oils, protein in- crustations, and soot.  Highly concentrated, individual dilution ratios guarantee cus- tomized cleaning solutions	in accordance with the CLP Regulation  NTA-free  Neutral to slightly alkaline pH value  No preservatives  Pleasant to use	and mechanical applications (see table)  Gentle on surfaces made of metal, plastics, wood, ceramics, rubber, and many more	biodegradable in accordance with EU regulations  No silicate, no phosphate  VOC-free  Cleans at ambient temperature already  – low energy











# FOR CLEAN, FOR CLEAN F, FOR CLEAN V

#### FOR CLEAN application table



	Manual application	Mechanical application	Ultrasonic cleaning devices	Aluminium cleaning
FOR CLEAN	<b>√</b>	-	<b>√</b>	compatibility test
FOR CLEAN F	<b>√</b>	<b>√</b>	$\checkmark$	$\checkmark$
FOR CLEAN V	$\checkmark$	-	-	Carry out a compatibility test

Carry out

#### The extraordinary benefits at a glance

- High cleaning performance
- Safe and pleasant to use
- Environmentally compatible
- ⇒ Powerful at low temperatures already (in hot-water parts washers and spray cleaning systems from 40°C low-foaming)
- Cost reduction by individual, customized dilution



bio-chem AUTRASYS Clean

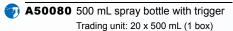
The efficient, fast and safe application system

to be used in cleaning.



#### **FOR CLEAN**

Maximum performance on mineral and vegetable oils and greases, machining oils, food residues, protein incrustations, soot, and many more



- A01080 10 L jerrycan A03080 30 L jerrycan
- **A20080** 200 L drum
- A10080 1000 L IBC



#### **FOR CLEAN F**

Low-foaming – developed for mechanical use and wherever foam is disruptive. Cleans and removes machining oils, lubricants, residues, etc.Individually dilutable up to 1:100, depending on the cleaning task.

- A50013 500 mL spray bottle with trigger
  Trading unit: 20 x 500 mL (1 box)
- **A01013** 10 L jerrycan **A03013** 30 L jerrycan
- **A20013** 200 L drum
- A10013 1000 L IBC



#### **FOR CLEAN V**

Slightly viscous cleaning gel, with very good adhesion to surfaces ideal for cleaning perpendicular or other upright surfaces. Guarantees a long soaking time of the cleaner on the surface.

- **A50022** 500 mL spray bottle with trigger Trading unit: 20 x 500 mL (1 box)
- A01022 10 L jerrycan A03022 30 L jerrycan
- **A20022** 200 L drum
- A10022 1000 L IBC











#### UNO



- **A50001** 500 mL plastic bottle with trigger Trading unit: 20 x 500 mL (1 box)
- **A01001** 10 L jerrycan
- **A03001** 30 L jerrycan
- **A20001** 200 L drum
- 10001 1000 L IBC

metal, wood, plastic, ceramics and many more.

The cleaner works on the basis of detergent substances (surfactants) that by reducing the sur-

The cleaner works on the basis of detergent substances (surfactants) that by reducing the surface tension dissolve the residues from the surfaces to be cleaned. As no stable emulsions are formed (demulsifying), greases and oils go to the surface of the rinsing solution where they can be removed. The rinsing solution remains powerful and active for a long time. Heating to 90 °C max can increase cleaning performance many times over.

Phosphate- and VOC-free **cleaner and degreaser** (highly concentrated, dilutable to 1:40) for removing oil-, grease- and protein residues (flyspeck, blood etc.) from surfaces made of

- Not subject to the VOC regulation, NTA-free
- Compatible with oil separators
- Surfactants are biodegradable in accordance with European Regulation
- Not subject to mandatory labelling in accordance with the European Directive



Ideal for low-temperature cleaning

Fields of use • Manually and mechanically (e.g. in pressure washers and ultrasonic cleaning devices)

 Universally for the cleaning of industrial and mechanical facilities in the entire industry, especially in the metalworking industry, and in the range of home and hobby

#### Please note:

Do not use the concentrated cleaner on aluminium and zinc coatings!









For mechanical application and corrosion-sensitive parts.

#### UNO F Foamless

- A50031 500 mL plastic bottle with trigger
  Trading unit: 20 x 500 mL (1 box)
- **A01031** 10 L jerrycan
  - **A03031** 30 L jerrycan
- O A20031 200 L drum
- 1000 LIBC

#### UNO PF

Foamless + corrosion protection

- A50030 500 mL plastic bottle with trigger
  Trading unit: 20 x 500 mL (1 box)
- **A01030** 10 L jerrycan
  - **A03030** 30 L jerrycan
- **A20030** 200 L drum
  - A10030 1000 L IBC



#### **UNO W**

Product description in accordance with ÖNORM B 5105: Aqueous phosphate-free **alkaline cleaner** with selected foam-free surfactants (highly concentrated, can be diluted with water up to 1:40) for the cleaning and degreasing of machines, tools, workshop equipment, vehicles etc. (corrosion inhibitors guarantee temporary corrosion protection). Dissolves vigorously oils, greases, resins, waxes, nicotine, insect speck, food residues, soot, bitumen- and tar spatter etc. from metal, plastics, tiles, wood, rubber etc. (material-conserving and non-abrasive).

Surfactants are biodegradable in accordance with European Regulation, not subject to mandatory labelling in accordance with the European Direct



- Non-combustible, can be heated to 90 °C max, which accelerates the cleaning process
- Compatible with oil separators
- TESTED IN ACCORDANCE WITH ÖNORM B 5105
- Registration number: ON-N 2011 139

Fields of use • Adition to manual cleaning it can also be used in floor cleaning devices, pressure washers, spray extraction devices, and hot-water parts washers.



#### **UNO W**

- **A00189** 1000 mL plastic bottle with trigger Trading unit: 10 x 1000 ml (1 box)
- **A01089** 10 L jerrycan
- **A030**89 30 L jerrycan
- **A20089** 200 L drum
- A10089 1000 L IBC



empfohlene Anwendungskonzentration	1:40	1:30	1:20	1:10	Concentrated
Aluminium parts	•				
Workshop pits				•	
Car roof lining				•	
Bitumen spatter					
Busses		•			
Chrome		•			
Diesel residues				•	
Stainless steel degreasing		•	•	•	•
Grease					•
Flyspeck				•	
Fork lift trucks		•			
Hard floors				•	
Plastic parts		•			
Plastic floors		•			
Trucks				•	
Truck tarpaulins				•	
Machines				•	
Nicotine				•	
Oil				•	
Oil residues				•	
Oil-polluted engines				•	
Repair parts	•	•	•	•	
Soot					•
Steel degreasing			•		•
Tar spatter					
Gates		•	•	•	•
Workshop equipment		•			
Tools		•	•	•	
Machine tools		•			
Tent tarpaulins	•				

Pressure washers 3 – 5 %



Applicable

food

## **Floor Cleaner**

**High-performance, water-based, low-foaming cleaner** for everyday mechanical and manual floor cleaning. Stands out for its fast and thorough dirt removal properties. Its excellent wetting properties release dirt even from small crannies and depressions. Powerfully releases oils, greases, resins, waxes, insect dirt, food debris, and soot. Cleans all water-resistant flooring materials such as tiles, timber, linoleum, PVC, rubber, matt natural stone (e.g. marble, granite) in a material-protecting and non-abrasive manner.

- Environment-consciously designed; thevSurfactants are biodegradable in accordance with European Regulation, phosphate- and chelating-agent-free, contains no AOX compounds
- **☼** Not subject to mandatory labelling in accordance with the European Directive
- Tighly concentrated, can be diluted up to 1:100, which saves warehousing costs
- Incombustible, pleasantly fresh scent

Fields of use • For the cleaning of industrial surfaces, shop floors and workshop floors, production sites and warehouses. Can be used manually and mechanically in pressure washers, floor cleaning machines, etc. By heating to a maximum of 90 °C cleaning performance can be increased many times over.



#### **Floor Cleaner**

**A01015** 10 L jerrycan

**A03015** 30 L jerrycan

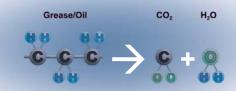
**A20015** 200 L plastic drum

A10015 1000 L IBC

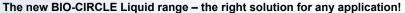








# Five high-performance BIO-CIRCLE Liquids guarantee optimum results in parts washing.



The BIO-CIRCLE Liquids are specialists in clean solutions. They stand out for their fast and thorough cleaning performance. The natural micro-organisms they contain degrade the oil ingressed and guarantee long durability and a long serviceable life with a constantly high cleaning performance. The aqueous BIO-CIRCLE Liquids do not contain any solvents, thus avoiding VOC emissions, and meet the requirements of the solvent directive. They do not require placarding/labelling under the Ordinance on Hazardous Substances and EU Directive, and are therefore easy and safe to use, store, and transport.

We will be happy to advise you on which BIO-CIRCLE Liquid is the right one for you. We give competent advice and valuable tips on technically correct parts washing.











#### natural

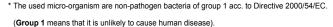
The BIO-CIRCLE benefits from the powers of Nature in order to provide for user-friendly, ecofriendly, and economical parts washing. They clean without any solvents or cold cleaners, thus protecting the employee and the environment from highly volatile vapours. The pH-adjusted cleaning medium BIO-CIRCLE Liquid dissolves processing oils, cutting coolants, anti-corrosion products, light greases and similar contaminations as well as particle contaminations from the parts. The easy-to-clean filter system separates coarse and fine contaminations, and the natural micro-organisms biodegrade the greases and oils, thus maintaining the cleaning performance.

#### simple

The BIO-CIRCLE Liquids are ready to use, which eliminates the risk of incorrect dilution and variations in quality, and the necessity of regular bath analyses. The aqueous BIO-CIRCLE Liquids do not pit the surfaces; all materials from plastics to steel can be cleaned.

#### profitable

BIO-CIRCLE Liquid features a bath lifetime that is up to four times as long as with cold cleaners. Even with a higher contamination input a constantly good cleaning result is achieved. BIO-CIRCLE Liquid means no hazard to humans and the environment, paired with high efficiency and cost effectiveness.





#### **BIO-CIRCLE L**

Product description in accordance with ÖNORM B 5105:

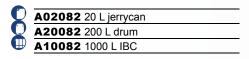
- Optimally adjusted to everyday soiling
- **⇒** Oil separator compatible
- ⇒ TESTED IN ACCORDANCE WITH ÖNORM B 5105 Registration number: ON-N 2011 140
- ⇒ Fresh apple scent
- Special corrosion inhibitors guarantee temporary protection after cleaning
- **⇒** NSF certified
- ⇒ Improved skin protection through panthenol
- Skin-friendliness has been dermatologically tested
- ⇒ Surfactants on the basis of renewable resource





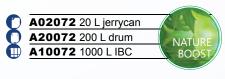
#### **BIO-CIRCLE L Turbo**

- **○** Low foaming for mechanical cleaning in the BIO-CIRCLE Turbo
- ⇒ For temperatures of up to 50 °C
- With corrosion protection



#### **BIO-CIRCLE L Ultra**

- Remove strong contaminations, such as bitumen, anti-rust waxes, burned-in grease, oil, oil carbon, coloured pigment
- Special corrosion inhibitors guarantee temporary protection after cleaning
- ⇒ NSF certification
- Works on basis of renewable raw materials





#### **CLEANING CONSISTENCY**

Cleaning performance (%)

BIO-CIRCLE®

SOLVENTS

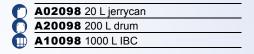
Week 1

Week 2

Week 4

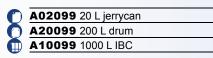
#### **BIO-CIRCLE L Heavy Duty**

- Removes even heavy oils and greases
- Improved cleaning performance especially for tenacious soiling
- ⇒ Without scent can be added as required
- Special corrosion inhibitors guarantee temporary protection after cleaning
- **⊃** Skin-friendliness has been dermatologically tested
- ⇒ For temperatures of up to 45 °C
- ⇒ Surfactants on the basis of renewable resource



#### **BIO-CIRCLE L Aluminium**

- ⇒ For the cleaning of sensitive materials, such as aluminium
- ⇒ Virtually residue-free
- Without scent can be added as required
- **⇒** NSF certification
- **⊃** Surfactants on the basis of renewable resources
- Skin-friendliness has been dermatologically tested















#### **STARS**



Professional liquid highly concentrated cleaners and degreasers for mechanical parts washing and degreasing. Can be applied as pre- and intermediate cleaners in the metalworking and metal processing industry and as VOC substitutes.

- Low-foaming, NTA-free, VOC-free
- Optimal cleaning temperature at 60 °C
- Demulsifying oil and grease input can be removed by means of mechanical methods (e.g. plate separator)
- **○** Very low application concentration (from 0.5%)

Fields of use • Mechanically parts cleaning in production and maintenance (flow-through spray units, flood- and immersion washing, high pressure cleaning)



#### Tip:

We'll be happy to provide you with titration regulations and curves for determining the concentration!





Alkaline fine-tuned for the cleaning of steel, iron, casting and plastics. High dissolving power for oil and oil residues, greaseand soot residues.



Highly alkaline cleaner for the removal of most persistent pollution such as oil incrustations, resin formations, anti-frictionand roller bearings, wheel sets or single varnish layers.

#### **STAR 200**

A03078 30 L jerrycan
A20078 200 L drum

A10078 1000 L IBC

#### **STAR 300**

A03079 30 L jerrycan
A20079 200 L drum

A10079 1000 L IBC



#### high-gloss polish High-gloss polished Non-ferrous Galvanized **STAR 200** x x x x x **STAR 300** x **ALUSTAR 200** X x x **ALUSTAR 300**

# Saving energy with the bio-chem cleaners

STAR 200, ALUSTAR 200 and 300:

Specially developed for low-temperature cleaning.

These cleaners already operate effectively at ambient temperature.







#### **STAR US**

#### The innovative optimization of ultrasonic cleaning

The STAR US cleaners will **optimize ultrasonic cleaning performance.** The selected surfactants and active ingredients are constantly active in strong intensive cleaning (25 kHz) as well as in fine cleaning (45 kHz).

- Water-based cleaners, NTA-free
- Surfactants are biodegradable in accordance with European Regulation
- Highly concentrated
- Demulsifying





Alkaline universal cleaning concentrate. Will remove oil, grease, soot, cooling lubricants, coking residues, tinder, dust, fingerprints etc. Not subject to mandatory labelling.

STAR US 2

VOC reduced!

**A00553-2** 5 L jerrycan

**A01053-2** 10 L jerrycan **A03053-2** 30 L jerrycan

Will remove persistent oil- and grease contaminations even from very rough surfaces. Will not affect aluminium and castings.

Alkaline.

STAR US 4

VOC free!

**A00553-4** 5 L jerrycan

**A01053-4** 10 L jerrycan **A03053-4** 30 L jerrycan

Strong alkaline cleaner. Will remove extreme contaminations such as incrustations, cracking, and resinifications.

Can also be used to remove thin layers of varnish.

STAR US 5

VOC free!

**A00553-5** 5 L jerrycan

**A01053-5** 10 L jerrycan **A03053-5** 30 L jerrycan

Acidic cleaning concentrate.
Will remove rust, limescale,
oxides and mineral deposits
from acid-resistant parts and
surfaces. Not subject to

mandatory labelling.

STAR US 1

VOC reduced!

VOC

free!

STAR US I

A00553-1 5 L jerrycan

A01053-1 10 L jerrycan

**A03053-1** 30 L jerrycan

For the removal of oil- and grease contaminations and pigment contaminations that are difficult to remove. Alkaline. Gentle on the material, aluminium and non-ferrous metals will not be affected.

**STAR US 3** 

**A00553-3** 5 L jerrycan

**A01053-3** 10 L jerrycan

A03053-3 30 L jerrycan





VOC reduced!







# Clean Blue by Bio-Circle

100% performance at ambient temperature already. Energy-efficient parts cleaning for removing oils and other common contaminations. And all that without any solvents, benzines or cold cleaners. The water-based cleaners are suitable for use in maintenance, production, parts cleaning, service, and any sector of the industry

#### **BIO-CIRCLE L Blue**



**A20090** 20 L jerrycan **A20090** 200 L drum **A10090** 1000 L IBC Resource-efficient surfactant-based cleaner for use in the BIO-CIRCLE Blue parts washer. For pH-neutral cleaning and degreasing of small parts in workshops, industries and service. Contains microorganisms that degrade introduced oils, thus guaranteeing a long cleaning bath service life.

- Water-based cleaning fluid non-combustible
- Low-energy cleaner
- Free from VOC in accordance with 1999/13/EC
- No labelling required under the CLP regulation



Surfactants on the basis of renewable raw materials

Field of use • Fill into the BIO-CIRCLE Blue parts washer as concentrate.





**Nature Boost cleaner** with high dissolving power. The water-based power cleaner for use in the BIO-CIRCLE Blue parts washer or for manual cleaning. Removes persistent contaminations, such as special greases that are difficult to remove, rubber traces, waxes and bitumen, from surfaces.

- VOC-free
- No labelling required under the CLP regulation
- Alternative to solvents or petroleum
- Low-energy cleaner

Field of use • For universal or mechanical use

 Ideal for the pre-cleaning of very persistent contaminations in the BIO-CIRCLE Clean Box, Clean Box Maxi 1, Clean Box Maxi 2, or Clean Box Flex

# A03032 30 L jerrycan A20032 200 L drum A10032 1000 L IBC

A01032 10 L jerrycan

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