

rhenus FU 800

The future of coolants

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Sales Convention

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Safer process.
Safer profit.



The future of coolants




Amine- and boron-free products: why?

- Unique selling point
 - No competitor is in a position to develop and manufacture these products in the same way as demanded by user requirements
 - This is where a particularly innovative enterprise can benefit from Rhenus Lub → no competitor shows as much strength in any of the required criteria as Rhenus Lub

- Focus on people
 - Skin compatibility → through low pH values
 - Health protection → no labelling on the drum in accordance with the new health protection ordinance

rhenus FU 800

Parameter

- Amine- and boric acid-free
- Free from formaldehyde releasers (pre-preserved)
- No pictogram 
- Mineral oil content: approx. 36%
- Efficient lubricant additivation
- New corrosion protection concept



rhenus FU 800



rhenus FU 800 at work

Safer process.
Safer profit.



Suitable industries for rehus FU 800

For which industries is the product suitable?

- Generally for every industry (e.g. toolmaking, aviation, medical technology)



**Especially suitable for:
Companies with an awareness
of health and the environment**

Suitable industries for rehenus FU 800

- **For which processes is the product suitable?**
 - Turning
 - Drilling
 - Milling
 - Reaming
 - Gun drilling
 - Thread cutting

- **For which processes would Rhenus Lub primarily not recommend the product?**
 - Grinding
 - Honing
 - Thread moulding
 - Heavy machining of stainless steels
 - Broaching



rhenus FU 800 is suitable for:

- **For which materials is the product suitable?**
 - Aluminium, various alloys
 - Titanium
 - Non-ferrous metals
 - Steel
 - Cast iron

- **For which materials is the product explicitly unsuitable?**
 - Magnesium
 - Germanium
 - Molybdenum

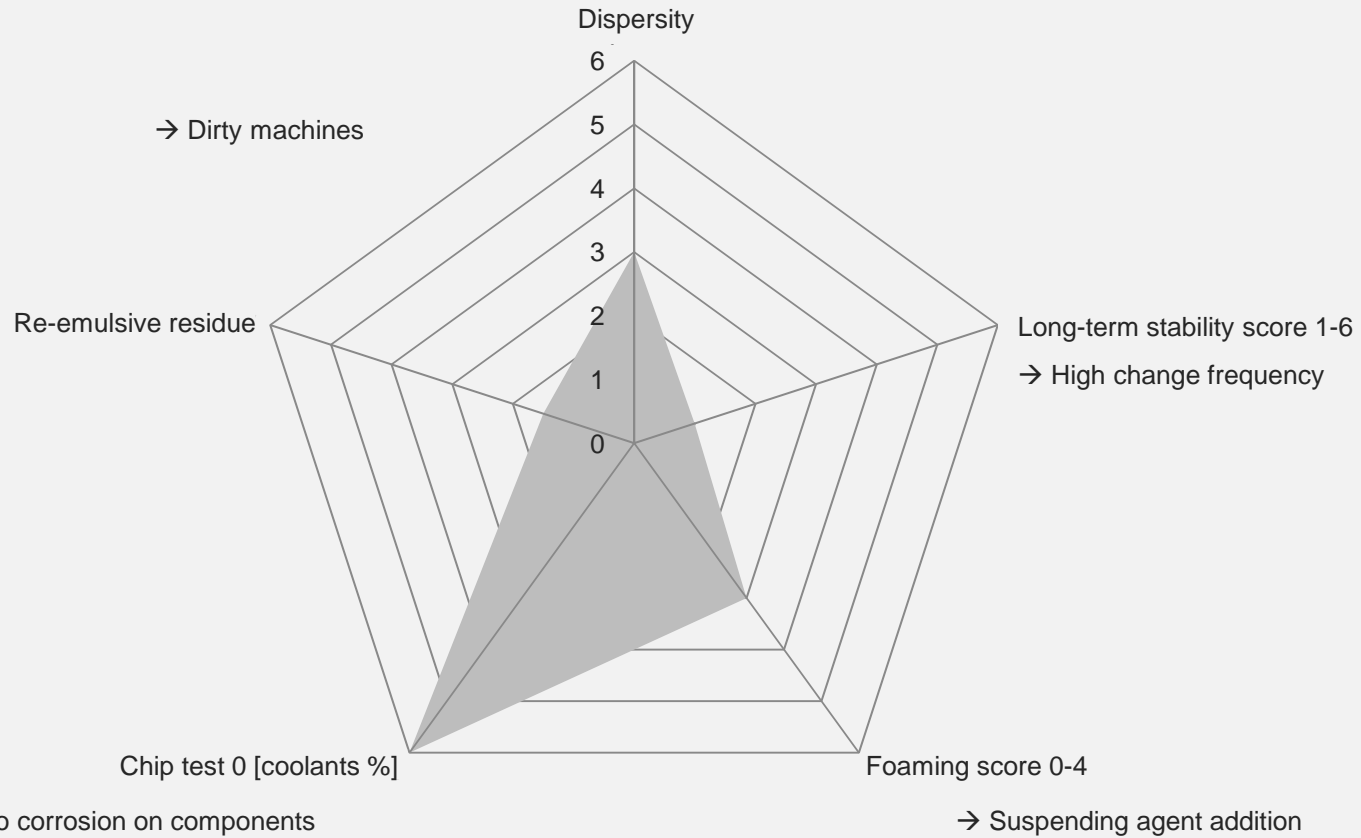
Evolution and added value

- **rhenus – Evolution**

rhenus FU 50 → rhenus FU 750 → rhenus FU 850 → rhenus FU 800

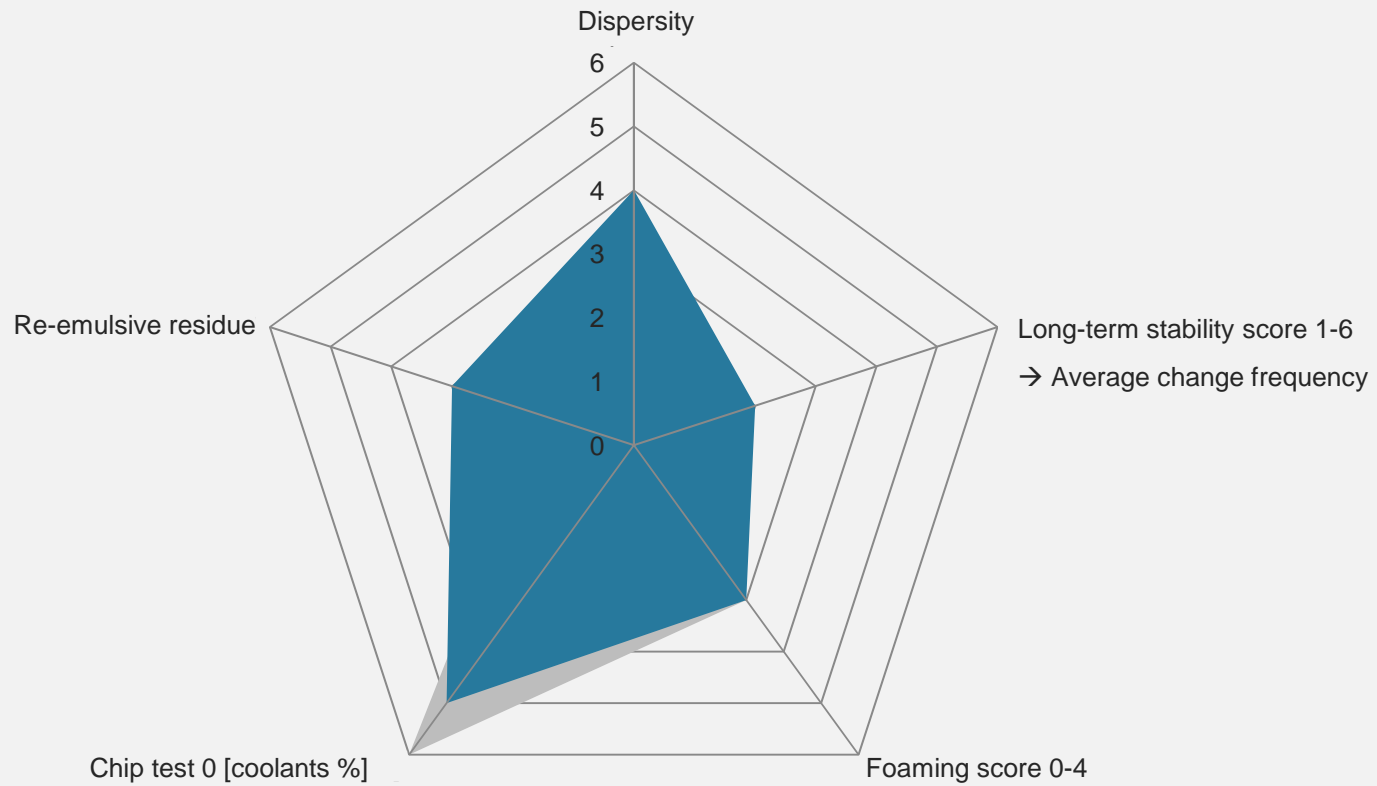
- **Product benefits in comparison with the preceding rhenus product**
 - Colour, odour
 - Residue behaviour
 - Better flushing behaviour than rhenus FU 850
 - Better long-term stability thanks to the ingredients

Evolution



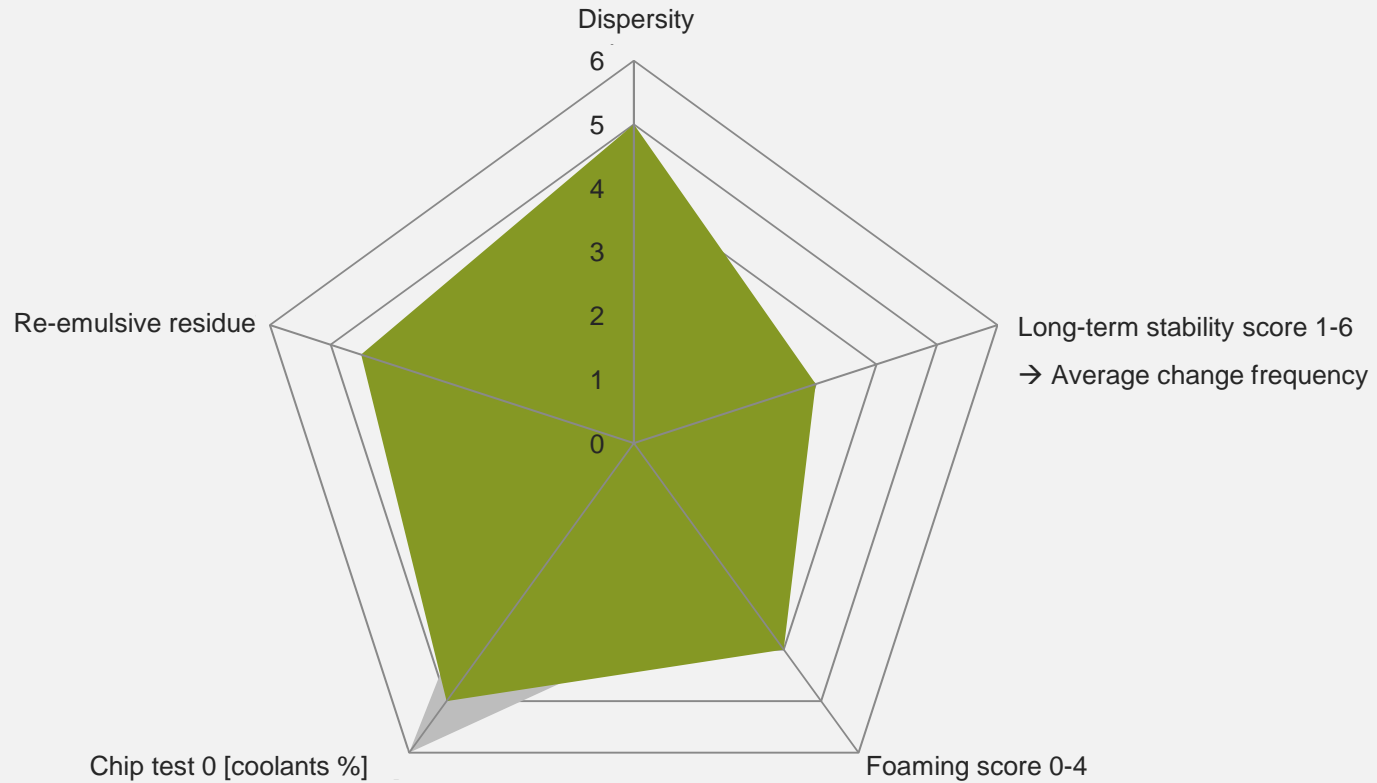
■ rhenus FU 50

Evolution



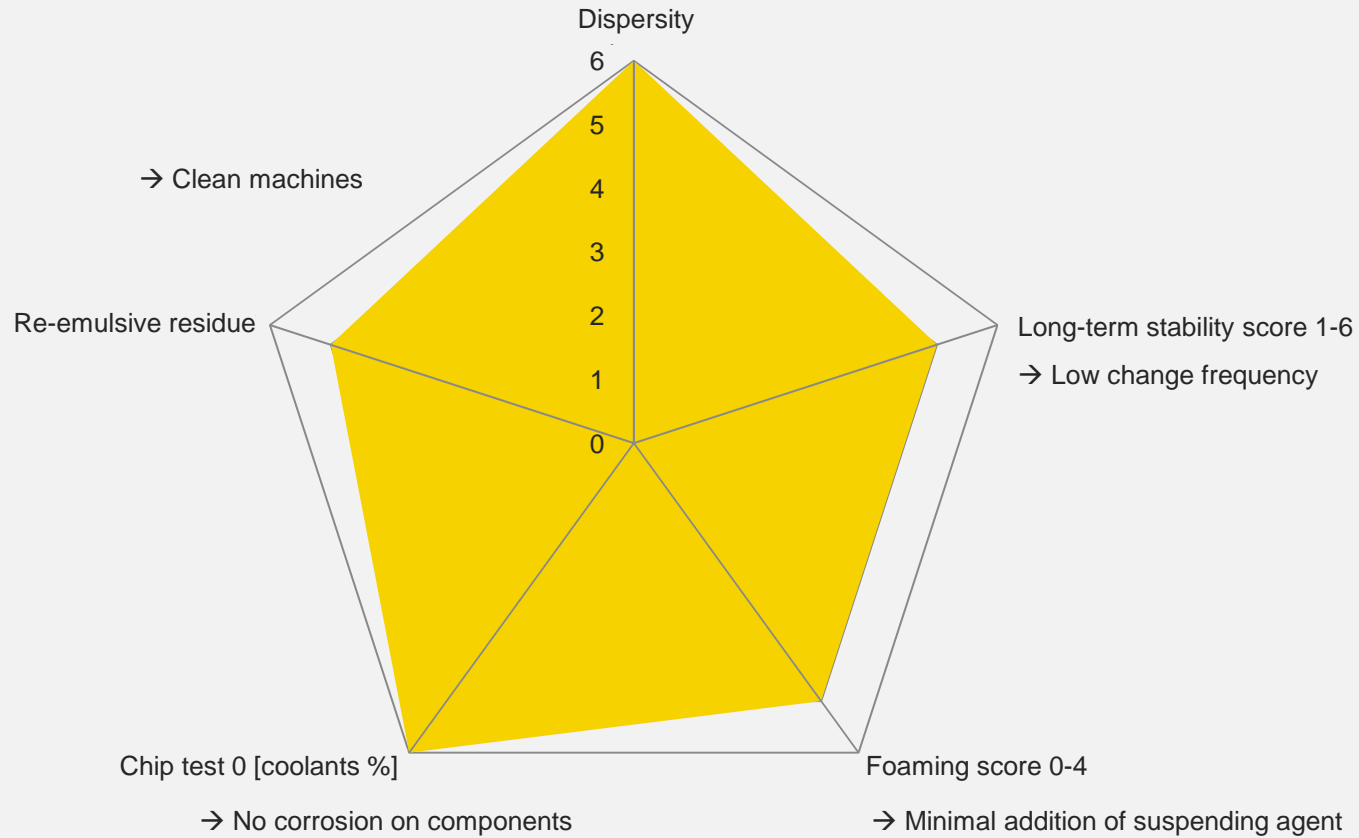
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Evolution



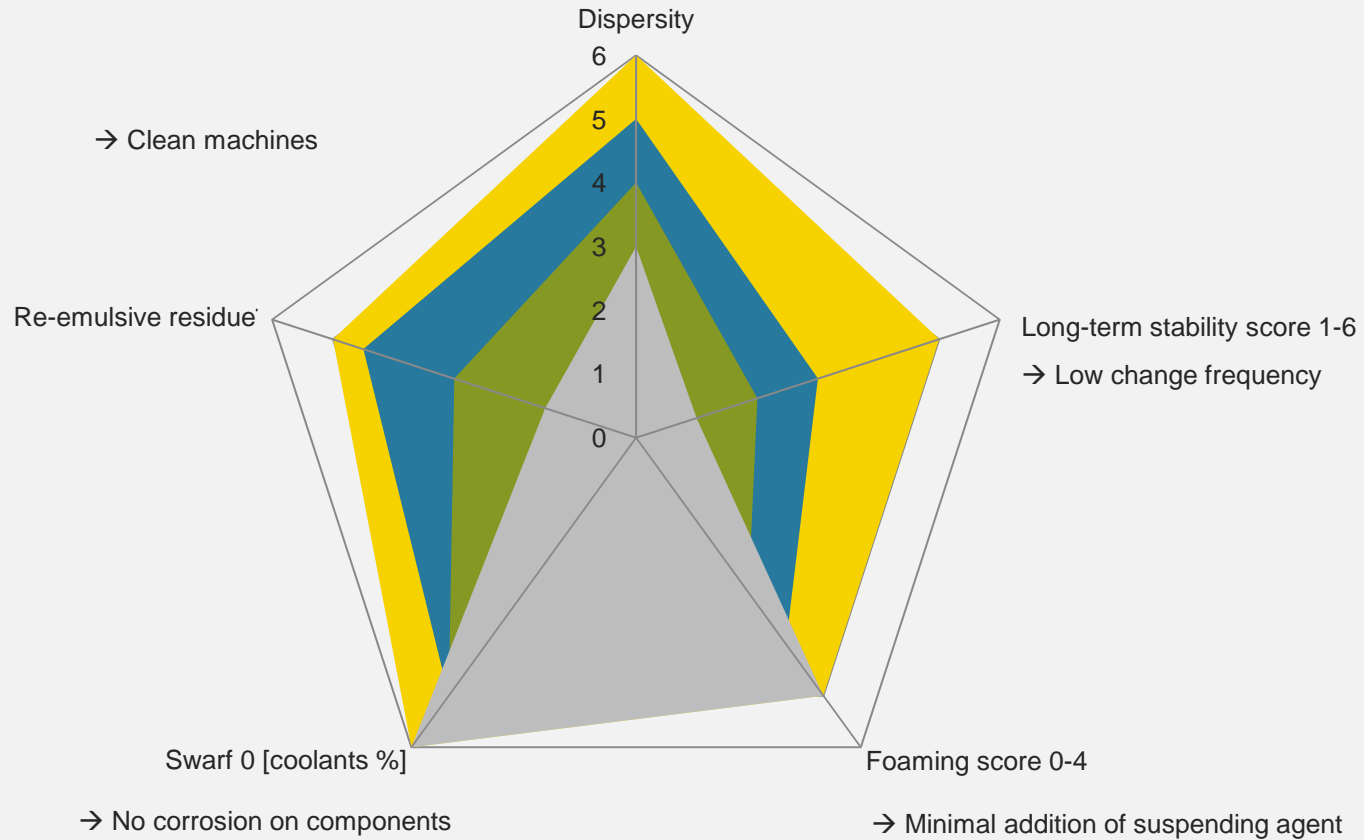
■ rhenus FU 50 ■ rhenus FU 750 ■ rhenus FU 850

Evolution



■ rhenus FU 50 ■ rhenus FU 750 ■ rhenus FU 850 ■ **rhenus FU 800**

The revolution



■ rhenus FU 800 ■ rhenus FU 850 ■ rhenus FU 750 ■ rhenus FU 50

Product Advantages/Differentiation

- Labelling-free → no pictogram on the drum!
- Skin-friendly thanks to the low pH value
- No residue in the machine despite being amine-free
- No change in appearance (colour) with long-term use, including when processing cast iron

USP

Price positioning



Price positioning

- Max. delivery time of 48 hours for an order of 5 drums
- Annual general check (and recommendations) for your machine pool by trained coolant technician



The 7 decisive reasons

- Costs

1

- Coordinated top-up concentrations (1.5–2.5%)
- Reduced suspending agent consumption
- Lower cleaning cost
- Longer change intervals

- Relief

2

- Universal in use (process/material)
- Easy to use
- Reduced suspending agent consumption
- Clean viewing windows on machines

The 7 decisive reasons

Environmental protection and health

▪ Environment

3

- Can be used in water protection areas as it is water protection class 1
- Low top-up concentrations
- Low waste water burden as the absorption of Cu, Zn, Co ions is avoided

▪ Health

- Free from labelling requirements
- Skin-friendly thanks to a low pH value
- No raw materials from the SVHC list (Substance of Very High Concern)
- No amines, therefore no reactants for forming carcinogenic nitrosamines
- No ingredients harmful to reproduction such as boric acid
- No formaldehyde depot as a preservative (formaldehyde classed as carcinogenic)

The 7 decisive reasons

- Inquisitiveness

4

- Latest coolant technology
- Suitable for modern machine pools
- Integrates the advantages of amine-based coolants

- Process reliability

5

- High-performance product
- Coordinated replenishment concentrations (1.5–2.5%)
- No adhesion, no deposits
- Conforms the directives of TRGS 611, DGUV rule 109-003 (BGR/GUV-R 143) , VDI 3035

The 7 decisive reasons

- Image

6

- Pioneering product
- Nothing comparable on the market
- Global Compact
- How does it fit in with corporate philosophies?
- Made in Germany
- Reduced suspending agent consumption

- Social

7

- Immediate acceptance by machine operators
- Neutral odour even with extended machine downtimes
- Whitish appearance even after extended machine downtimes
- No health concerns → labelling-free

Target group 1

- Operations managers/department managers
 - High-performance product
 - Reduced suspending agent consumption
 - Latest coolant technology

- Purchasing
 - Universal, one product is all you need
 - Long service life, fewer changes, less top-up
 - Reduced suspending agent consumption
→ Reduction of operating costs

Action!

Send invitations to visit reference clients

Carry out reference telephone calls

Target group 2

- Company physicians/works councils
 - Skin-friendly due to low pH value
 - Not subject to labelling requirements
 - No raw materials from the SVHC list (Substance of Very High Concern)
- Environmental and work safety officers
 - No sick leave due to good skin compatibility
 - Can even be used in water protection areas as it is water protection class 1

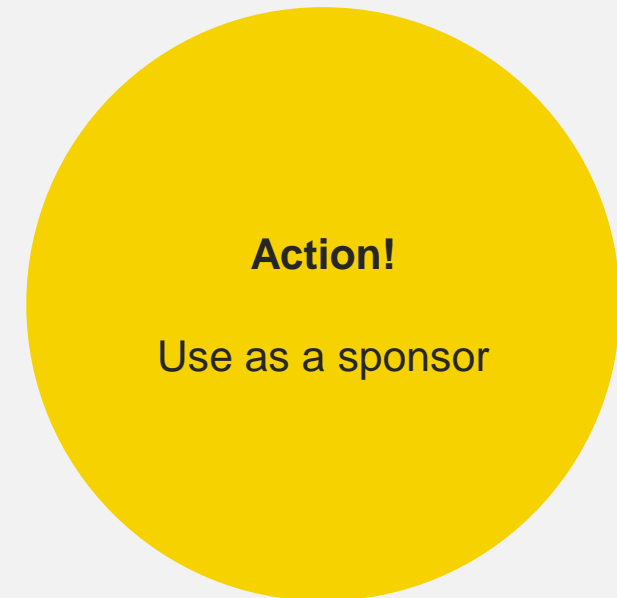
Action!

Make product documents and skin test (patch test) available

Target group 3

- Machine operators
 - Health protection
 - Cleaner machines, less cleaning work
 - Pleasant odour
 - White colour

- Maintenance engineers
 - Clean machines
 - Less maintenance work



Which customer groups can be addressed?

Industry	Workpiece	Material	Processes
Railway technology	Wheels	Forged steel St 52	Turning
Medical technology	Bright steel for implants such as bone nails	Steel 1.4441	Grinding
Medical technology	Endoscopes	Steel, aluminium	Turning



Which customer groups can be addressed?

Industry	Workpiece	Material	Processes
Automotive	Cylinder head / block	Al 2013 Al 2014	Milling
Automotive	Intake pipe	AZ91HP	Milling, drilling, threads



Which customer groups can be addressed?

Industry	Workpiece	Material	Processes
Machining	Thread rolling	Al 6082 Al 7075	Stud holes and through holes
Automotive	Housing	AlMg1SiCu	Milling
Automotive	Oil sump, cylinder head cover	Alu AC- AlSi12Cu1	Milling Drilling

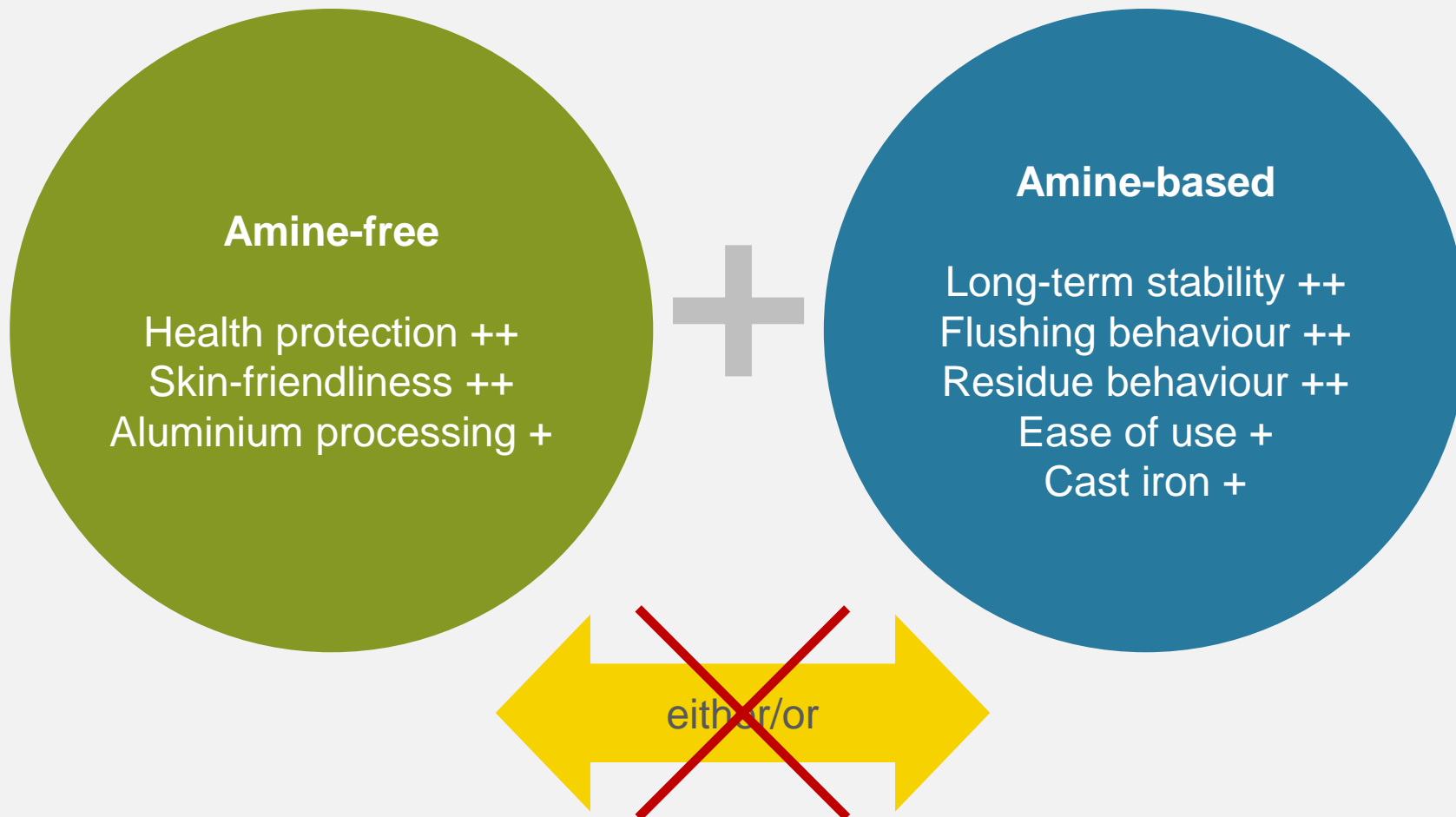


Which customer groups can be addressed?

Industry	Workpiece	Material	Processes
Machining	Semi-finished products	St 37 Tool steel 1.2379	Milling Peeling Turning
Medical technology	Implants	Titanium	Milling



Decision aids for internal use



The solution: rhenus FU 800

Free from amine, boron, formaldehyde depots



Health protection



Skin-friendliness



Long-term stability



Flushing behaviour



Residue behaviour



Ease of use



Aluminium processing



Steel



Cast iron



Summary

Safer process.
Safer profit.



NOT SUBJECT TO ANY
LABELLING REQUIREMENTS



- Free from formaldehyde depot substances
- Boron-free
- Amine-free
- No SVHC
- Conforms to TRGS 611, BGR GUV-R 143, VDI 3035

NOT HAZARDOUS TO HUMANS
OR THE ENVIRONMENT

1 class 1



pH value 8.5-9.4

5-20 °d

- Low pH value, so kind to the skin
- Achieved a very good patch test (epicutaneous test) result
- Quickly accepted by employees
- Water hazard class 1

CONSISTENTLY HIGH PERFORMANCE



- Can be used universally, high performance
- Lower consumption, high level of flexibility
- Clean machines, clean parts
- Excellent long-term stability
- Suitable for use at a wide range of water hardness levels
- Suitable for use with sensitive materials
- Designed to meet the requirements of Industry 4.0

Summary



NOT SUBJECT TO ANY LABELLING REQUIREMENTS

100%

- Free from formaldehyde dependent substances
- Boron-free
- Amine-free
- No SVHC
- Conforms to TRGS 611, BGR GUV-R 143, VDI 3035

NOT HAZARDOUS TO HUMANS OR THE ENVIRONMENT

Water hazard class 1

pH value 8.5-9.4

5-20 °d

- Low pH value, so kind to the skin
- Achieved a very good patch test (epicutaneous test) result
- Quickly accepted by employees
- Water hazard class 1

EXTREMELY HIGH PERFORMANCE

- Used universally, high performance
- High consumption, high level of efficiency
- Suitable for use with sensitive machines, clean parts
- High long-term stability
- Suitable for use at a wide range of hardness levels
- Suitable for use with sensitive surfaces
- Designed to meet the requirements of ISO 14001:2015 clause 4.0

Summary

Safer process.
Safer profit.



CONSISTENTLY HIGH PERFORMANCE

NOT HAZARDOUS TO HUMANS
OR THE ENVIRONMENT

NOT SUBJECT TO ANY
LABELLING REQUIREMENTS

Water hazard class 1

pH value 8



- Free from formaldehyde depot substances
- Boron-free
- Amine-free
- No SVHC
- Conforms to TRGS 611, BGR GUV-R 143, VDI 3035



5-20 °d

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Safer process.
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Help set a new milestone in the history
of coolants.

We wish you every
success!

A large, jagged iceberg of clear blue ice floats in dark, choppy water under a cloudy sky. The words "rhenus FU 8000" are carved into the front face of the iceberg in a large, white, sans-serif font.

rhenus FU 8000