

Ateco Process Cleaning & Surface Care Solutions

Protect the System. Restore the Surface. Document the Process.

Acuflow brings Ateco Services AG's specialized chemistry, validated cleaning methods and stainless-steel surface services to pharmaceutical, biotechnology and other critical-process environments. From initial cleaning and derouging to passivation, testing, surface restoration and documented GMP execution, Ateco supports the complete maintenance lifecycle of process systems.

[EXPLORE SOLUTIONS](#)[TALK TO AN EXPERT](#)

OUR SOLUTIONS

Innovative Chemistry

Diruneutra • Dirupure • Dirupass NB • Diruclean NS • Diruclean BX • Dirupass AP

Repair & Surface Restoration

Welding • Grinding • Mobile Electropolishing • Pump Reconditioning

Core Process Services

Inspection • Derouging • Passivation • Special Cleaning • Descaling • Pickling

Testing & Engineering

Deblacking • Inspection & Testing • Measurement & Material Testing
• Pharma & Plant Engineering

ATECO SAFETY & QUALITY FRAMEWORK

- SOP-defined, multi-stage controlled execution with process descriptions for each project phase.
- GMP-compliant chemicals manufactured in Switzerland in an ISO 9000-certified environment.
- Residue-free cleanliness as a defined outcome after cleaning.
- Project-specific safety concepts covering work safety, PPE and emergency measures.
- Correct treatment and disposal of generated wastewater in line with applicable requirements.
- Complete project documentation from initial condition assessment through final inspection.

INNOVATIVE CHEMISTRY

Validated Cleaning, Derouging & Passivation Products

Ateco states that its cleaning chemicals are produced in GMP-compliant facilities with traceability, documentation and analysis certificates. The portfolio includes pH-neutral, alkaline and acidic chemistries selected according to the surface condition and process objective.

Diruneutra Set

pH-Neutral Derouging System

Patented pH-neutral derouging system for rapid removal of rouge from stainless-steel water systems and process equipment.

Features

- pH-neutral derouging process
- Designed for AISI 316L, AISI 316 Ti and AISI 904L stainless-steel surfaces
- Short process times with in-process activity control
- High material compatibility
- Halide-free chemistry
- Validated residue-detection methods available
- Applicable to WFI systems, pure-steam systems, process vessels and autoclaves

Technical Specifications / Application Data

Parameter	Technical / Application Data
Primary Function	Derouging of stainless-steel water systems and process equipment
Process Temperature	>70 °C
Atmosphere	Oxygen excluded; residual oxygen <0.5%
Typical Process Time	0.5-4 hours depending on rouge condition
Diruneutra LIQ Dose	2.0% v/v
Diruneutra P Dose	0.6% w/v
Diruclean NS Addition	0.3-0.5% v/v
Material Compatibility	Stainless steels 1.4301, 1.4401, 1.4404, 1.4435, 1.4571, 1.4539; PP, PVC, PE, PTFE, PVDF, EPDM, silicone, PEEK, glass
Application Methods	Flooding / transfer-line derouging; closed-system spray/CIP workflows
Neutralization	Not required; local wastewater rules still apply
ENQUIRE NOW	
REQUEST TECHNICAL DATA	

Dirupure Set

pH-Neutral Derouging System

Patented pH-neutral derouging system designed for flexible operation across a broader temperature range and ambient-air processing.

Features

- pH-neutral derouging
- Short process duration
- Works in ambient-air atmosphere
- High material compatibility
- Halide-free
- Validated verification methods

- Suitable for WFI loops, pure-steam systems, vessels, autoclaves and washing machines

Technical Specifications / Application Data

Parameter	Technical / Application Data
Primary Function	Derouging of stainless-steel process and water systems
Process Temperature	20-85 °C depending on surface condition
Atmosphere	Ambient air
Typical Process Time	0.5-2 hours
Dirupure LIQ Dose	2.0% v/v
Dirupure P Dose	8.0% v/v
Material Compatibility	Stainless steels 1.4301, 1.4401, 1.4404, 1.4435, 1.4571, 1.4539; PP, PVC, PE, PTFE, PVDF, EPDM, silicone, PEEK, glass
Application Methods	Spraying, flooding and transfer-line derouging
Neutralization	Not required; local wastewater rules still apply
ENQUIRE NOW	
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Dirupass NB

pH-Neutral Passivation

Highly oxidizing cleaner used for stainless-steel passivation after derouging or as part of initial passivation workflows.

Features

- Designed for passivation after Diruneutra or Dirupure derouging
- Can be used for initial passivation with Diruclean preparation
- pH-neutral process approach
- Low application concentration
- Halide-free
- Surfactant-free and non-foaming
- Suitable for validated cleaning/passivation
- Compatible with mixed loads including plastics, stainless steel, nickel alloys and glass

Technical Specifications / Application Data

Parameter	Technical / Application Data
Primary Function	Passivation of stainless-steel surfaces
Application Concentration	2.0-10.0% v/v depending on procedure
pH	5.5 for a 1% solution in demineralized water
Density	1.13 g/ml concentrate
Appearance	Clear, colourless liquid
Process Formats	CIP spray, flooding and cleaning-machine use
Material Compatibility	Stainless steels 1.4301, 1.4401, 1.4404, 1.4435, 1.4571, 1.4539; PE, PTFE, PVDF, EPDM, silicone, PEEK, glass
Neutralization	Not required; local wastewater rules still apply
ENQUIRE NOW	
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Diruclean NS

pH-Neutral Special Cleaner

Surfactant-free cleaner with broad material compatibility, particularly suited to initial cleaning and validated pharmaceutical cleaning processes.

Features

- pH-neutral in application solution
- Silicate- and surfactant-free
- Foam-free
- Excellent rinsing
- No mandatory neutralization step
- Compatible with aluminium and anodized aluminium
- Suitable for CIP spray, automatic machines, flooding and manual cleaning
- Well suited to initial cleaning of new system components

Technical Specifications / Application Data

Parameter	Technical / Application Data
Primary Function	Initial / validated cleaning of pharmaceutical system components
Typical Concentration	0.5-2.0% v/v
pH	Approx. 8.0 for a 1% solution in demineralized water
Density	1.20 g/ml concentrate
Appearance	Clear, colourless to slightly yellowish
Material Compatibility	Aluminium, anodized aluminium, stainless steel, plastics, glass
Application Methods	CIP spray, automatic cleaning machines, flooding, manual cleaning
Residue Verification	Analytical methods available for proving residue-free cleaning
ENQUIRE NOW	
REQUEST TECHNICAL DATA	

Diruclean BX

Alkaline CIP Cleaner

Alkaline CIP cleaning agent developed for demanding GMP-regulated production environments and residue-free, validatable cleaning.

Features

- Alkaline-formulated CIP cleaner
- Designed for GMP-regulated production environments
- Supports residue-free and validated cleaning
- Developed for pharmaceutical and biotechnology requirements
- Applicable in pharmaceutical, chemical, biotechnology and cosmetics environments

Technical Specifications / Application Data

Parameter	Technical / Application Data
Primary Function	Alkaline CIP cleaning
Process Environment	GMP-regulated production
Cleaning Objective	Residue-free, validatable cleaning
Target Industries	Pharmaceutical, chemical, biotechnology, cosmetics
Technical Data	Current Ateco technical-data sheet should be referenced for exact dosing, pH, density and compatibility values before publication
ENQUIRE NOW	
REQUEST TECHNICAL DATA	

Dirupass AP

Acidic Passivation / CIP Cleaner

Acidic cleaner for passivation of stainless steel, suitable for CIP spray, flooding and cleaning-machine applications.

Features

- Passivation of stainless-steel surfaces
- Removes tarnish, flash rust, extraneous rust, silicate deposits and protein encrustations
- Low application concentrations
- No halides
- Material-friendly process
- Non-foaming and easily rinsed
- Validated residue-analysis methods available
- Suitable for electropolished surfaces

Technical Specifications / Application Data

Parameter	Technical / Application Data
Primary Function	Acidic stainless-steel passivation and cleaning
Application Concentration	2.0-4.0% v/v
pH	<2.5 for 1-10% solution in demineralized water
Density	1.11 g/ml concentrate
Appearance	Clear, colourless liquid
Application Methods	CIP spray, flooding, cleaning-machine use
Material Compatibility	Stainless steel; other materials require compatibility confirmation
Process Position	Applied after alkaline cleaning or derouging with Diruneutra / Dirupure
ENQUIRE NOW REQUEST TECHNICAL DATA	

EXPERT SERVICES

Bespoke Solutions for Stainless-Steel Systems

Ateco's core competencies include passivation of new systems and derouging, deblacking and repassivation of existing stainless-steel systems. Services are supported by controlled execution, inspection, testing and complete documentation.

On-Site Inspection / Assessment

Features

- Inspection of customer sites and process systems
- Assessment of rouge and surface condition
- Basis for defining treatment scope and chemistry

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Establish current system condition before treatment
Typical Outputs	Visual assessment, surface-condition findings, treatment recommendation
Documentation Role	Forms part of pre-treatment condition record

Derouging

Features

- Removal of rouge from stainless-steel surfaces
- Can be integrated with pH-neutral Ateco chemistry
- Designed to restore a controlled stainless-steel surface condition

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Remove corrosion-product deposits / rouge
Typical Systems	Process vessels, piping, WFI / pure-water systems, equipment
Follow-On Step	Passivation / repassivation as required

Passivation / Repassivation

Features

- Creates or restores a chromium-oxide-rich protective surface layer
- Applicable to new systems and post-derouging surfaces
- Can be executed using pH-neutral or acidic Ateco workflows depending on application

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Restore protective passive layer
System Stage	New-system commissioning or existing-system maintenance
Validation	Process parameters and acceptance criteria documented

Special Cleaning Processes

Features

- pH-neutral cleaning designed not to attack stainless steel
- Environmentally considerate disposal approach subject to local rules
- Application-specific chemistry selection

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Remove contamination while protecting process surfaces
Chemistry	pH-neutral cleaning options
Application	Pharmaceutical and critical process equipment

Descaling

Features

- Chemical descaling using acid mixtures adapted to the material
- Application-specific chemistry selection
- Supports removal of mineral / scale deposits

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Remove scale deposits
Method	Chemical descaling
Selection Basis	Material and deposit type

Pickling

Features

- Controlled removal of the upper metal layer
- Produces a clean, smooth metallic surface
- Used where surface oxide / contamination requires controlled removal

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Surface cleaning and oxide removal
Mechanism	Controlled chemical removal of surface layer
Outcome	Clean, smooth surface

Welding

Features

- Repair and reconditioning of damaged parts

- Supports containers, pumps and system components
- Can form part of broader restoration work

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Repair / recondition damaged metallic components
Typical Equipment	Containers, pumps, system components
Service Model	Workshop or project-based repair

Grinding

Features

- Professional and precise hand-grinding
- Available at Ateco technical centre or on customer premises
- Supports localized surface correction and finishing

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Mechanical surface correction / finishing
Execution	On-site or technical centre
Method	Professional hand grinding

Mobile Electropolishing

Features

- On-site repair of surface damage
- Electrochemical surface restoration
- Reduces need to remove large installed components where suitable

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Localized on-site surface restoration
Method	Mobile electropolishing
Typical Benefit	Repair of surface damage without full component removal

Pump Reconditioning / Service

Features

- Advice and support for pump reconditioning
- Custom products and spare parts
- Service-call support

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Restore / maintain pump condition
Scope	Reconditioning, spares, custom solutions, service calls
Engagement	Application-specific assessment

Deblacking

Features

- Removes stubborn contamination and iron-containing deposits
- Gentle on materials
- Supports long-term surface quality and process reliability

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Remove black / iron-containing contamination
Surface	Stainless steel
Outcome	Improved surface condition and process reliability

Inspection & Testing Services

Features

- Non-destructive testing and visual inspection
- Detection of deviations and defects
- Supports system integrity and long-term reliability

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Assess integrity and condition
Methods	Visual and non-destructive testing
Output	Documented findings for maintenance / quality decisions

Measurement & Material Testing

Features

- Provides data on material condition and surface quality
- Supports documented quality approvals
- Provides objective inputs for maintenance decisions

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Quantify surface / material condition
Output	Measurement and material-condition data
Use	Maintenance planning and quality approval

Pharma & Plant Engineering

Features

- Quality assurance across equipment lifecycle

- Support from manufacturing and installation through commissioning and operation
- Focus on specification fulfilment

Technical Scope / Deliverables

Parameter	Technical / Application Data
Primary Purpose	Lifecycle quality assurance
Lifecycle	Manufacture → installation → commissioning → operation
Output	Documented compliance to project specifications

DOCUMENTATION & GMP TRACEABILITY

Document the Condition. Document the Process. Document the Result.

Ateco documents technical operations through SOP-defined, multi-stage controlled processes. The documentation begins with the system-condition assessment, records all work steps and chemistry use, and continues through the final inspection.

Standard Documentation Can Include

- System condition before treatment: visual assessment, rouge-layer thickness, surface roughness and related observations.
- Cleaning-process details: chemicals used, concentration, metal content where relevant, target/actual process parameters and residue measurement.
- System condition after treatment: visual assessment, cleanliness, residue measurement, surface roughness and passive condition.
- Analysis certificate for chemical purity and originality.
- Execution protocols verifying process steps against acceptance criteria.
- Recorded deviations and documented follow-up actions where deviations occur.

WHERE ATECO FITS

New System	Initial Cleaning	Passivation	Operation	Inspection	Derouging / Deblacking	Repassivation	Ongoing Maintenance
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APPLICATION ENVIRONMENTS

- Pharmaceutical and chemical manufacturing
- Biotechnology
- Food and beverage
- Cosmetics
- Hospitals and laboratories
- Plant and equipment engineering
- OEM and process-equipment manufacturing

ACUFLOW + ATECO

Global Surface-Care Expertise. Local Application Support.

Acuflow helps customers translate equipment condition and maintenance objectives into the appropriate Ateco chemistry, service workflow and documentation package.

Assess System	Define Surface Issue	Select Chemistry / Service	Execute Controlled Process	Verify Result	Document & Close
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FINAL SECTION

[Talk to an Expert](#)

What Condition Is Your System In?

Whether you are commissioning a new system, managing rouge, planning repassivation, validating a cleaning process, or restoring stainless-steel equipment, start with a condition assessment.

Name*

Company*

Mobile*

E-mail*

Equipment / System*

Describe your maintenance requirement

SUBMIT

Recommended Page Navigation

- Overview
- Chemistry Products
- Expert Services
- Testing & Engineering
- Features & Technical Data
- Documentation & GMP
- Why Ateco
- Talk to an Expert

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