SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name

ROCAL Acid Plus

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture
Descaler

Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet

Address
ROTHENBERGER Werkzeuge GmbH
Industriestraße 7
65779 Kelkheim

Telephone no. +49 (0) 61 95 / 800 - 1
Fax no. +49 (0) 6195 / 800 - 3500
e-mail info@rothenberger.com

Advice on Safety Data Sheet
sdb_info@umco.de

1.4 Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)
Skin Corr. 1A; H314
Eye Dam. 1; H318
STOT SE 3; H335

Classification information
This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Hazard pictograms


GHS05


GHS07

Signal word
Danger

Hazardous component(s) to be indicated on label:
hydrochloric acid
phosphoric acid

Hazard statement(s)

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statement(s)

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container to a facility in accordance with local and national regulations.

2.3 Other hazards

This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

PBT assessment
The product is not considered to be a PBT.

vPvB assessment
The product is not considered to be a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Hazardous ingredients

No	Substance name		Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	**hydrochloric acid**		**pls. refer to footnote (2)**	
	7647-01-0 231-595-7 017-002-01-X 01-2119484862-27	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 25.00 - < 50.00	wt%
2	**phosphoric acid**			
	7664-38-2 231-633-2 015-011-00-6 01-2119485924-24	Skin Corr. 1B; H314 Eye Dam. 1; H318	< 5.00	wt%
3	**Benzyl-C12-14-alkyldimethylammonium chlorides**			
	85409-22-9 939-350-2 - -	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0.10	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16
(2) According to the latest state of knowledge and applying the criteria set out in annex I to Regulation (EC) No 1272/2008 , the aforementioned classification is required. This classification goes beyond the classification set out in table 3, Annex VI to Regulation (CE) No 1272/2008.

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)

1	B	Met. Corr. 1; H290: C >= 0.1% Skin Irrit. 2; H315: C >= 1% Eye Dam. 1; H318: C >= 1% STOT SE 3; H335: C >= 10% Skin Corr. 1B; H314: C >= 10% Skin Corr. 1A; H314: C >= 25%	-	-
2	B	Skin Irrit. 2; H315: C >= 10% Eye Irrit. 2; H319: C >= 10% Skin Corr. 1B; H314: C >= 25%	-	-
3	-	-	M = 10	M = 1

Full text for the notes: pls. see section 16 “Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)”.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
If the patient is likely to become unconscious, place and transport in stable sideways position. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. Seek medical advice immediately.

After inhalation
Ensure supply of fresh air. Do not use mouth-to-mouth or mouth-to-nose resuscitation.

After skin contact
Wash immediately with plenty of water for several minutes. Seek medical attention.

After eye contact
Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Get immediate ophthalmic treatment.

After ingestion
Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Effects
Risk of stomach perforation

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Extinguishing measures to suit surroundings. Carbon dioxide; Extinguishing powder; Foam; Water spray jet

Unsuitable extinguishing media
High power water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Hydrogen chloride (HCl); When heating or in case of fire formation of toxic gases.

5.3 Advice for firefighters

Cool closed containers exposed to fire with water. Use self-contained breathing apparatus. Wear protective clothing. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Keep people away and stay on the upwind side.

For emergency responders

Personal protective equipment (PPE) - see section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up
Pick up with absorbent material (e.g., sand, kieselguhr, acid binder, universal binder, sawdust). Clean contaminated surfaces thoroughly.

6.4 Reference to other sections
Information regarding waste disposal, see section 13. Information regarding personal protective measures, see section 8. Information regarding safe handling, see section 7.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances. Provide good ventilation at the work area (local exhaust ventilation, if necessary). Open and handle container with care.

General protective and hygiene measures
Have emergency shower available. Provide eye wash fountain in work area. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin.

Advice on protection against fire and explosion
Keep away from ignition sources and provide for good ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Containers which are opened must be carefully closed and kept upright to prevent leakage. Keep only in the original container. Keep container hermetically closed in a dry, cool and well-ventilated place.

Incompatible products
Do not store together with foodstuffs. Substances to be avoided, see section 10.

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.		EC no.	
1	**hydrochloric acid**	**7647-01-0**		**231-595-7**	
	2000/39/EC				
	Hydrogen chloride				
	WEL short-term (15 min reference period)	15	mg/m³	10	ppm
	WEL long-term (8-hr TWA reference period)	8	mg/m³	5	ppm
	List of approved workplace exposure limits (WELs) / EH40				
	Hydrogen Chloride gas and aerosol mists				
	WEL short-term (15 min reference period)	8	mg/m³	5	ppm
	WEL long-term (8-hr TWA reference period)	2	mg/m³	1	ppm
2	**phosphoric acid**	**7664-38-2**		**231-633-2**	
	List of approved workplace exposure limits (WELs) / EH40				
	Orthophosphoric acid				
	WEL short-term (15 min reference period)	2	mg/m³		
	WEL long-term (8-hr TWA reference period)	1	mg/m³		
	2000/39/EC				
	Orthophosphoric acid				

	WEL short-term (15 min reference period)	2	mg/m³
	WEL long-term (8-hr TWA reference period)	1	mg/m³

DNEL, DMEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**hydrochloric acid**			**7647-01-0 231-595-7**	
	inhalative	Short term (acut)	local	15	mg/m³
	inhalative	Long term (chronic)	local	8	mg/m³
2	**phosphoric acid**			**7664-38-2 231-633-2**	
	inhalative	Long term (chronic)	local	1	mg/m³
	inhalative	Short term (acut)	local	2	mg/m³
	inhalative	Long term (chronic)	systemic	10.7	mg/m³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	**phosphoric acid**			**7664-38-2 231-633-2**	
	oral	Long term (chronic)	systemic	0.1	mg/kg bw/day
	inhalative	Long term (chronic)	local	0.36	mg/m³
	inhalative	Long term (chronic)	systemic	4.57	mg/m³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	**hydrochloric acid**		**7647-01-0 231-595-7**	
	water	fresh water	0.036	mg/L
	water	marine water	0.036	mg/L
	water	Aqua intermittent	0.045	mg/L
	sewage treatment plant	-	0.036	mg/L

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Tightly fitting safety glasses (EN 166).

Hand protection
In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other
Chemical-resistant work clothes.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation
liquid

Form
liquid

Colour
red

Odour
pungent

pH value	
Value	0.1 - 1
Source	supplier

Boiling point / boiling range
No data available

Melting point/freezing point
No data available

Decomposition temperature	
Value	200 °C
Source	supplier

Flash point
No data available

Ignition temperature
No data available

Flammability
No data available

Lower explosion limit
No data available

Upper explosion limit
No data available

Vapour pressure
No data available

Relative vapour density
No data available

Relative density
No data available

Density	
Value	1.13 - 1.17 g/cm³
Source	supplier

Solubility in water	
Comments	soluble

Solubility
No data available

Partition coefficient n-octanol/water (log value)
No data available

Kinematic viscosity
No data available

Solvent content

Value	0.06	- 0.69	%

Solids content		
Value	5.16	%

Particle characteristics
No data available

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Dangerous reactions are not expected if the product is handled according to its intended use.

10.2 Chemical stability
The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions
Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid
None, if handled according to intended use.

10.5 Incompatible materials
Oxidizing agents; Alkalis; Metals; Aldehydes; Sulphides; Peroxides; organic materials

10.6 Hazardous decomposition products
Corrosive gases/vapours; In case of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity				
No	**Substance name**	**CAS no.**	**EC no.**	
1	**phosphoric acid**	**7664-38-2**	**231-633-2**	
LD50	appr.	2600		mg/kg bodyweight
Species	rat			
Method	OECD 423			
Source	ECHA			

Acute dermal toxicity
No data available

Acute inhalational toxicity
No data available

Skin corrosion/irritation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**hydrochloric acid**	**7647-01-0**	**231-595-7**
Species	rabbit		
with reference to	37% HCl		
Method	OECD 404		
Source	ECHA		
Evaluation	corrosive		
2	**phosphoric acid**	**7664-38-2**	**231-633-2**
Species	rabbit		
Source	ECHA		
Evaluation	strongly corrosive		

Serious eye damage/irritation			
No	**Substance name**	**CAS no.**	**EC no.**

1	hydrochloric acid	7647-01-0	231-595-7
Species		rabbit	
with reference to		10% HCl	
Method		OECD 405	
Source		ECHA	
Evaluation		Irreversible effects on the eye	
2	**phosphoric acid**	**7664-38-2**	**231-633-2**
Species		rabbit	
Source		ECHA	
Evaluation		strongly corrosive	

Respiratory or skin sensitisation			
No	**Substance name**	**CAS no.**	**EC no.**
1	**hydrochloric acid**	**7647-01-0**	**231-595-7**
Route of exposure		Skin	
Species		guinea pig	
with reference to		98% HCl	
Method		OECD 406	
Source		ECHA	
Evaluation		non-sensitizing	

Germ cell mutagenicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**hydrochloric acid**	**7647-01-0**	**231-595-7**
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	**phosphoric acid**	**7664-38-2**	**231-633-2**
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Reproduction toxicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**phosphoric acid**	**7664-38-2**	**231-633-2**
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Carcinogenicity			
No	**Substance name**	**CAS no.**	**EC no.**
1	**hydrochloric acid**	**7647-01-0**	**231-595-7**
Route of exposure		inhalational	
Species		rat	
Method		OECD 451	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

STOT - single exposure
No data available

STOT - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Information on other hazards

Endocrine disrupting properties
No data available.

Other information
No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)					
No	**Substance name**	**CAS no.**		**EC no.**	
1	**hydrochloric acid**	**7647-01-0**		**231-595-7**	
LC50	3.25	-	3.5		mg/l
Duration of exposure			96		h
Species	Lepomis macrochirus				
with reference to	100% HCl				
Source	ECHA				

Toxicity to fish (chronic)
No data available

Toxicity to Daphnia (acute)					
No	**Substance name**	**CAS no.**		**EC no.**	
1	**hydrochloric acid**	**7647-01-0**		**231-595-7**	
EC50			4.92		mg/l
Duration of exposure			48		h
Species	Daphnia magna				
with reference to	36% HCl				
Method	OECD 202				
Source	ECHA				
2	**phosphoric acid**	**7664-38-2**		**231-633-2**	
EC50	>		100		mg/l
Duration of exposure			48		h
Species	Daphnia magna				
Method	OECD 202				
Source	ECHA				

Toxicity to Daphnia (chronic)
No data available

Toxicity to algae (acute)					
No	**Substance name**	**CAS no.**		**EC no.**	
1	**hydrochloric acid**	**7647-01-0**		**231-595-7**	
EC50			4.7		mg/l
Duration of exposure			72		h
Species	Chlorella vulgaris				
with reference to	36% HCl				
Method	OECD 201				
Source	ECHA				
2	**phosphoric acid**	**7664-38-2**		**231-633-2**	
EC50	>		100		mg/l
Duration of exposure			72		h
Species	Desmodesmus subspicatus				
Method	OECD 201				
Source	ECHA				

Toxicity to algae (chronic)
No data available

Bacteria toxicity					
No	**Substance name**	**CAS no.**		**EC no.**	
1	**hydrochloric acid**	**7647-01-0**		**231-595-7**	
EC50	5	-	5.5		mg/l
Duration of exposure			3		h
Species	activated sludge				
with reference to	36% HCl				
Method	OECD 209				
Source	ECHA				

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	The product is not considered to be a PBT.
vPvB assessment	The product is not considered to be a vPvB.

12.6 Endocrine disrupting properties
No data available.

12.7 Other adverse effects
No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	8
Classification code	C1
Packing group	II
Hazard identification no.	80
UN number	UN3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name	hydrochloric acid phosphoric acid
Tunnel restriction code	E
Label	8

14.2 Transport IMDG

Class	8
Packing group	II
UN number	UN3264
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name	hydrochloric acid phosphoric acid
EmS	F-A, S-B
Label	8

14.3 Transport ICAO-TI / IATA

Class	8
Packing group	II
UN number	UN3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Technical name	hydrochloric acid phosphoric acid
Label	8

14.4 Other information
No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Maritime transport in bulk according to IMO instruments
Not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation
According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES				
The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.				No 3
The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.				
No	**Substance name**	**CAS no.**	**EC no.**	**No**
1	**hydrochloric acid**	**7647-01-0**	**231-595-7**	**75**
2	**phosphoric acid**	**7664-38-2**	**231-633-2**	**75**

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This product is not subject to Part 1 or 2 of Annex I.

Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)		
VOC content	0.69	g/l
VOC-value	0.06	%

15.2 Chemical safety assessment
A chemical safety assessment has not been carried out for this mixture.

SECTION 16: Other information

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No 1272/2008, Annex VI)

B	Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid … %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

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