Safety Data Sheet

according to UK REACH Regulation

SANIT Limescale Remover

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

1.1. Product identifier

SANIT Limescale Remover

UFI: 7N98-304E-C002-YJ29

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

Use of the substance/mixture

Cleaning agent, acidic.

1.3. Details of the supplier of the safety data sheet

Company name: SANIT-Chemie Reinigungsmittel und -geräte GmbH
Street: Dieselstr. 38
Place: D-74211 Leingarten
Telephone: +49 7131 902100 Telefax: +49 7131 404360
E-mail: info@sanit-chemie.de
Contact person: Produktmanagement Telephone: 07131 90210-20
Internet: www.sanit-chemie.de

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 4; H302
Acute Tox. 4; H332
Skin Corr. 1; H314
Eye Dam. 1; H318
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

formic acid

Signal word: Danger

Pictograms:

Hazard statements

H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash ... thoroughly after handling.
P280	Wear protective gloves and eye protection/face protection.
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.

2.3. Other hazards

Die Stoffe im Gemisch erfüllen nicht die PBT/vPvB Kriterien gemäß REACH, Anhang XIII.
Endokrines Störpotential: nicht gelistet

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
64-18-6	formic acid			45 - < 60 %
	200-579-1	607-001-00-0	01-2119491174-37	
	Acute Tox. 3, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1; H331 H302 H314 H318			
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides			0.1 - < 1 %
	939-350-2		01-2119970550-39	
	Acute Tox. 4, Skin Corr. 1, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H318 H400 H410			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64-18-6	200-579-1	formic acid	45 - < 60 %
	inhalation: LC50 = 7,85 mg/l (vapours); oral: LD50 = 730 mg/kg Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 10 - < 90 Skin Irrit. 2; H315: >= 2 - < 10 Eye Irrit. 2; H319: >= 2 - < 10		
85409-22-9	939-350-2	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides	0.1 - < 1 %
	dermal: LD50 = 3400 mg/kg; oral: LD50 = 350 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=1		

Labelling for contents according to Regulation (EC) No 648/2004

< 5 % cationic surfactants.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air.

After contact with skin

After contact with skin, wash immediately with: Water. Subsequently wash off with: Polyethylene glykol 400. Remove contaminated, saturated clothing immediately.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Potential hazards: Stomach perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-18-6	Formic acid	5	9.6		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
64-18-6	formic acid			
Worker DNEL, long-term		inhalation	systemic	9,5 mg/m³
Consumer DNEL, long-term		inhalation	systemic	3 mg/m³
Worker DNEL, acute		inhalation	local	19 mg/m³
Consumer DNEL, acute		inhalation	local	9,5 mg/m³

PNEC values

CAS No	Substance	
Environmental compartment		Value
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides	
Freshwater		0,00042 mg/l
Freshwater (intermittent releases)		0,00016 mg/l
Marine water		0,000096 mg/l
Marine water (intermittent releases)		0,000207 mg/l
Freshwater sediment		68 mg/kg
Marine sediment		15,75 mg/kg
Soil		1,66 mg/kg

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Tested protective gloves are to be worn: NBR (Nitrile rubber). CR (polychloroprenes, Chloroprene rubber). FKM (fluororubber). Thickness of glove material: 0,6 mm Breakthrough times and swelling properties of the material must be taken into consideration. penetration time (maximum wearing period): 8h

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	red	
Odour:	stinging	
Melting point/freezing point:		10 °C
Boiling point or initial boiling point and boiling range:		100 °C
Flash point:		66 °C
pH-Value:		0,5

Water solubility:	completely miscible
Vapour pressure:	not determined
Density:	1,12 g/cm³

9.2. Other information

Information with regard to physical hazard classes

Oxidizing properties

not determined

Other safety characteristics

Viscosity / dynamic:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Slowly corrodes aluminium and zink under hydrogen evolution.

10.3. Possibility of hazardous reactions

Alkalis (alkalis).

10.5. Incompatible materials

Oxidizing agents, strong. Alkalis (alkalis).

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.

Harmful if inhaled.

ATEmix calculated

ATE (oral) 1622 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 17,44 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
64-18-6	formic acid					
	oral	LD50 mg/kg	730	Rat	ECHA	OECD 401
	inhalation (4 h) vapour	LC50	7,85 mg/l	Rat	ECHA	OECD 403
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides					
	oral	LD50 mg/kg	350	Rat	ECHA	OECD 401
	dermal	LD50 mg/kg	3400	rabbit	Echa	EPA OPPTS 870.1200

Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage. (On basis of test data)

Serious eye damage/eye irritation: Causes serious eye damage. (On basis of test data)

Irritant and corrosive effects. after ingestion: Potential hazards: Stomach perforation.

Sensitising effects

Based on available data, the classification criteria are not met.

no danger of sensitization.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

11.2. Information on other hazards

Endocrine disrupting properties

keine Information verfügbar

Other information

Has degreasing effect on the skin.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
64-18-6	formic acid						
	Acute fish toxicity	LC50	130 mg/l	96 h	Danio rerio (fresh water fish)	ECHA	OECD 203
	Acute algae toxicity	ErC50	>100 mg/l	72 h	algae	ECHA	OECD 201
	Acute crustacea toxicity	EC50	365 mg/l	48 h	Daphnia magna	ECHA	OECD 202
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides						
	Acute fish toxicity	LC50	0,28 mg/l	96 h	Pimephales promelas (Fresh water fish)	ECHA	EU Method C.1
	Acute algae toxicity	ErC50	0,049 mg/l	72 h	Skeletonema costatum (fresh water)	ECHA	EU Method C.3
	Acute crustacea toxicity	EC50	0,016 mg/l	48 h	Acartia tonsa (fresh water)	ECHA	EU Method C.2
	Fish toxicity	NOEC	0,032 mg/l	28 d	Pimephales promelas (Fresh water fish)	ECHA	U.S. EPA FIFRA 72-4(a)
	Crustacea toxicity	NOEC	0,0041 mg/l	21 d	Daphnia magna (Fresh water)	ECHA	OECD Guideline 211

12.2. Persistence and degradability

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64-18-6	formic acid			
	EU method C.4 -B	100%	14	ECHA
	Easily biodegradable (concerning to the criteria of the OECD)			
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides			
	OECD 301B Ready Biodegradability - CO2 Evolution	95,5%	28	ECHA
	Easily biodegradable (concerning to the criteria of the OECD)			

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-18-6	formic acid	-0,54
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides	0,5

BCF

CAS No	Chemical name	BCF	Species	Source
85409-22-9	quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides	73,2	aquatic species	ECHA

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Further information

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

070601 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; aqueous washing liquids and mother liquors; hazardous waste

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Water (with cleaning agent). Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN3412
14.2. UN proper shipping name: FORMIC ACID

14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8

Classification code: C3
Limited quantity: 1 L
Transport category: 2
Hazard No: 80
Tunnel restriction code: E
Other applicable information (land transport)
E2

Inland waterways transport (ADN)

14.1. UN number or ID number: UN3412
14.2. UN proper shipping name: FORMIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8

Classification code: C3
Limited quantity: 1 L
Other applicable information (inland waterways transport)
E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 3412
14.2. UN proper shipping name: FORMIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8

Special Provisions: -
Limited quantity: 1 L
EmS: F-A, S-B
Other applicable information (marine transport)
E2

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3412
14.2. UN proper shipping name: FORMIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8

Limited quantity Passenger: 0.5 L

IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

Other applicable information (air transport)

E2

: Y840

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Directive 2004/42/EC on VOC in paints and varnishes: 45 % (504 g/l)

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,13.

Abbreviations and acronyms

Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)