Safety Data Sheet

according to Regulation (EC) No 1907/2006

LAPIDON ENTKALKERLIQUID

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

1.1. Product identifier

LAPIDON ENTKALKERLIQUID

UFI: 1E83-W0WV-Q004-1D4W

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

Use of the substance/mixture

DESCALERS
Lime-Binding agent

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	DFS-DIAMON GmbH	
Street:	Ländenstr. 1	
Place:	D-93339 Riedenburg	
Telephone:	+49 (0)9442 9189 0	Telefax: +49 (0)9442 9189 37
E-mail:	info@dfs-diamon.de	
Contact person:	Armin Aunkofer	
E-mail:	armin.aunkofer@dfs-diamon.de	
Internet:	www.dfs-diamon.de	

Supplier

Company name:	VEIT GmbH	
Street:	Justus-von-Liebig-Strasse 15	
Place:	D-86899 Landsberg am Lech	
Telephone:	+49 8191 479 0	Telefax: +49 (0) 8191 479-149
E-mail:	info@veit.de	
Internet:	www.veit.de	

1.4. Emergency telephone number:

24 hour Emergency Contact: +49 (0) 700 24112112 (DFS)
+1 872 5888271

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin Corr. 1; H314
Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

Etidronic acid

Signal word: Danger

Pictograms:



Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

in aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
2809-21-4	Etidronic acid			5 - < 10 %
	220-552-8		01-2119510391-53	
	Met. Corr. 1, Acute Tox. 4, Eye Dam. 1; H290 H302 H318			
64-19-7	acetic acid			< 1 %
	200-580-7	607-002-00-6	01-2119474753-28	
	Flam. Liq. 3, Skin Corr. 1A; H226 H314			
34590-94-8	(2-methoxymethylethoxy)propanol			< 0.1 %
	252-104-2		01-2119450011-60	

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		
2809-21-4	220-552-8	Etidronic acid	5 - < 10 %
	oral: ATE = 500 mg/kg		
64-19-7	200-580-7	acetic acid	< 1 %
	Skin Corr. 1A; H314: >= 90 - 100 Skin Corr. 1B; H314: >= 25 - < 90 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25		
34590-94-8	252-104-2	(2-methoxymethylethoxy)propanol	< 0.1 %
	dermal: LD50 = 9510 mg/kg; oral: LD50 = > 5000 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.
When in doubt or if symptoms are observed, get medical advice.

After inhalation

Provide fresh air. Medical treatment necessary.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink 1 glass of of water. Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO_2), Water spray jet, Extinguishing powder. In case of major fire and large quantities: Water spray jet, alcohol resistant foam. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO_2). Pyrolysis products, toxic.

5.3. Advice for firefighters

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

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment.

For emergency responders

Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so. Cover drains.

For cleaning up

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.

Other information

Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

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

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Keep only in the original container.

Hints on joint storage

Do not store together with: Amines, Oxidizing agent, Alkalis (alkalis).

Further information on storage conditions

Protect against: Frost, Heat.
storage temperature: 5 - 30 °C

7.3. Specific end use(s)

DESCALERS
Lime-Binding agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
34590-94-8	(2-Methoxymethylethoxy)-l-propanol	50	308		TWA (8 h)	
64-19-7	Acetic acid	10	25		TWA (8 h)	
		20	50		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
34590-94-8	(2-methoxymethylethoxy)propanol			
Worker DNEL, long-term		inhalation	systemic	308 mg/m³
Worker DNEL, long-term		dermal	systemic	283 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	37,2 mg/m³
Consumer DNEL, long-term		dermal	systemic	121 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	36 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
2809-21-4	Etidronic acid	
Freshwater		0,136 mg/kg
Marine water		0,0136 mg/kg
Freshwater sediment		59 mg/kg
Marine sediment		5,9 mg/kg
Secondary poisoning		12 mg/kg
Micro-organisms in sewage treatment plants (STP)		20 mg/l
Soil		96 mg/kg
34590-94-8	(2-methoxymethylethoxy)propanol	
Freshwater		19 mg/l
Marine water		1,9 mg/l
Freshwater sediment		70,2 mg/kg
Marine sediment		7,02 mg/kg
Micro-organisms in sewage treatment plants (STP)		4168 mg/l
Soil		2,74 mg/kg

8.2. Exposure controls




Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Use eye protection according to EN 166.

Hand protection

Wear suitable gloves tested to EN374.
Suitable material: NBR (Nitrile rubber)
Thickness of glove material: >= 0,4 mm
Breakthrough time: <= 480 min.

Splash guard: Butyl caoutchouc (butyl rubber), NBR (Nitrile rubber).

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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing. (acid-resistant)

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Respiratory protection necessary at: exceeding exposure limit values

Thermal hazards

No information available.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	whitish, opaque
Odour:	stinging
Odour threshold:	not determined
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	Non-flammable.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	approx. 1 - 2
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure: (at 20 °C)	23 hPa
Density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Corrosive to metals.
Exothermic reaction with: Base, Oxidizing agent.

10.4. Conditions to avoid

Frost, Heat.

10.5. Incompatible materials

Amines, Oxidizing agent, Alkalis (alkalis).

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO2). Pyrolysis products, toxic.

SECTION 11: Toxicological information

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

Acute toxicity

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

ATEmix calculated

ATE (oral) 6204 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
2809-21-4	Etidronic acid				
	oral	ATE 500 mg/kg			
34590-94-8	(2-methoxymethylethoxy)propanol				
	oral	LD50 > 5000 mg/kg	Rat	Manufacturer	
	dermal	LD50 9510 mg/kg	Rabbit	Manufacturer	

Irritation and corrosivity

Causes severe skin burns and eye damage. (On basis of test data)
Causes serious eye damage. (On basis of test data)

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Information on likely routes of exposure

oral, Skin contact, Eye contact, Inhalation.

11.2. Information on other hazards

Endocrine disrupting properties

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

SECTION 12: Ecological information

12.1. Toxicity

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

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
34590-94-8	(2-methoxymethylethoxy)propanol						
	Acute fish toxicity	LC50	> 1000 mg/l	96 h	Poecilia reticulata (Guppy)	Manufacturer	
	Acute algae toxicity	ErC50	> 969 mg/l	72 h	Pseudokirchneriella subcapitata	Manufacturer	
	Acute crustacea toxicity	EC50	1919 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Algae toxicity	NOEC	969 mg/l	3 d	Pseudokirchneriella subcapitata	OECD 201	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
34590-94-8	(2-methoxymethylethoxy)propanol			
	O2 consumption, OECD F	96 %	28	Manufacturer
	Readily biodegradable (according to OECD criteria).			
	OECD 301F	75 %	10	Manufacturer
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
34590-94-8	(2-methoxymethylethoxy)propanol	0,004

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 3265
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Etidronic acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Classification code:	C3
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3265
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Etidronic acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Classification code:	C3
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3265
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Etidronic acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8



Special Provisions:	223 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	1 - acids

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3265

14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Etidronic acid)

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8



Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Corrosive

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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, Entry 75

2010/75/EU (VOC):	< 0,5 %
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	2 - obviously hazardous to water

Additional information

Observe in addition any national regulations!

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,6,8,9,11,12,14,15,16.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
M-Factor: Multiplication Factor
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
TI: Technical Instructions
DGR: Dangerous Goods Regulations
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
EG or EC: European Community
IE: Industrial Emissions
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).
Met. Corr: Substance or mixture corrosive to metals
Flam. Liq: Flammable liquid
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data

Relevant H and EUH statements (number and full text)

H226 Flammable liquid and vapour.
H290 May be corrosive to metals.

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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