Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

SYS-CLEAN MC1.0 Konzentrat/ concentrate

Version number: 8.0
Replaces version of: 2018-02-01 (7)

Revision: 2018-07-05
First version: 26.06.2013

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

1.1 Product identifier

Trade name	**SYS-CLEAN MC1.0 Konzentrat/ concentrate**
Product number	451832
Registration number (REACH)	not relevant (mixture)
CAS number	not relevant (mixture)

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

Relevant identified uses	Chemicals for various applications
Uses advised against	Do not use for squirting or spraying Do not use for products which come into direct contact with the skin

1.3 Details of the supplier of the safety data sheet

CSC JÄKLECHEMIE GmbH & Co. KG
Matthiasstr. 10 - 12
D-90431 Nürnberg
Germany

Telephone: ++49 (0) 911-32646 -0
Telefax: ++49 (0) 911-32646 -160
e-mail: Sdb@csc-jaekle.de

e-mail (competent person) sdb@csc-jaekle.de

1.4 Emergency telephone number

Medical Emergency information in case of poisoning: Poison Information Center Mainz - 24 h - Phone: +49 (0) 6313-19240 (advisory service in German or English language).

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification

Section	Hazard class	Category	Hazard class and category	Hazard state-ment
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

Classification				
Section	**Hazard class**	**Category**	**Hazard class and category**	**Hazard statement**
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335

for full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

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

Signal word danger

Pictograms

GHS05, GHS07

Hazard statements

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

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.

Hazardous ingredients for labelling 2-aminoethanol

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Specific Conc. Limits	M-Factors
2-(2-butoxyethoxy)ethanol	CAS No 112-34-5 EC No 203-961-6 REACH Reg. No 01-2119475104-44-xxxx	10 – < 25	Eye Irrit. 2 / H319			
2-aminoethanol	CAS No 141-43-5 EC No 205-483-3 REACH Reg. No 01-2119486455-28-xxxx	5 – < 10	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 Aquatic Chronic 3 / H412		STOT SE 3; H335: C ≥ 5 %	
Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-(octyloxy)-	CAS No 109075-72-1	0 – < 1	Eye Irrit. 2 / H319 Aquatic Acute 1 / H400			
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	CAS No 68391-01-5 EC No 269-919-4	0 – < 1	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Skin Corr. 1B / H314 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410			M-factor (acute) = 10.0

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.
Remove victim out of the danger area.
Take off immediately all contaminated clothing.
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.
In case of respiratory tract irritation, consult a physician.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
Call a physician immediately. Causes poorly healing wounds.

Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth immediately and drink plenty of water.
Do NOT induce vomiting.
Get immediate medical advice/attention.

Notes for the doctor

none

4.2 Most important symptoms and effects, both acute and delayed

Cough, pain, choking, and breathing difficulties.
Causes poorly healing wounds.
Causes severe burns.
Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protection suit, self-contained breathing apparatus (EN 133)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.
Ventilate affected area.
Avoid breathing mist/vapours/spray.
Do not get in eyes, on skin, or on clothing.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill

Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Keep away from sources of ignition - No smoking.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

frost

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
EU	2-(2-butoxyethoxy)eth-	112-34-5	IOELV	10	67.5	15	101.2	2017/2398/EU

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
	anol							
EU	2-aminoethanol	141-43-5	IOELV	1	2.5	3	7.6	2017/2398/EU
GB	2-(2-butoxyethoxy)ethanol	112-34-5	WEL	10	67.5	15	101.2	EH40/2005
GB	2-aminoethanol	141-43-5	WEL	1	2.5	3	7.6	EH40/2005

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	67.5 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	83 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-aminoethanol	141-43-5	DNEL	3.3 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
2-aminoethanol	141-43-5	DNEL	1 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	56 $^{mg}/_{kg}$	water
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	11 $^{mg}/_{l}$	water
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	1.1 $^{mg}/_{l}$	freshwater
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.11 $^{mg}/_{l}$	marine water
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	200 $^{mg}/_{l}$	sewage treatment plant (STP)

Relevant PNECs of components of the mixture				
Name of substance	**CAS No**	**Endpoint**	**Threshold level**	**Environmental compartment**
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4.4 $^{mg}/_{kg}$	freshwater sediment
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.44 $^{mg}/_{kg}$	marine sediment
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.32 $^{mg}/_{kg}$	soil
2-aminoethanol	141-43-5	PNEC	0.085 $^{mg}/_{l}$	freshwater
2-aminoethanol	141-43-5	PNEC	0.009 $^{mg}/_{l}$	marine water
2-aminoethanol	141-43-5	PNEC	100 $^{mg}/_{l}$	sewage treatment plant (STP)
2-aminoethanol	141-43-5	PNEC	0.434 $^{mg}/_{kg}$	freshwater sediment
2-aminoethanol	141-43-5	PNEC	0.043 $^{mg}/_{kg}$	marine sediment
2-aminoethanol	141-43-5	PNEC	0.037 $^{mg}/_{kg}$	soil

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Material	Material thickness	Breakthrough times of the glove material
these information are not available	these information are not available	these information are not available

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
In the case of wanting to use the gloves again, clean them before taking off and air them well.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Form	fluid
Colour	colourless
Odour	amine-like
Odour threshold	these information are not available

Other safety parameters

pH (value)	10.7
Melting point/freezing point	these information are not available
Initial boiling point and boiling range	>100 °C
Flash point	>90 °C
Evaporation rate	these information are not available
Flammability (solid, gas)	not relevant (fluid)
Explosive limits	
Lower explosion limit (LEL)	these information are not available
Upper explosion limit (UEL)	these information are not available
Vapour pressure	these information are not available
Density	0.955 $^{g}/_{cm^3}$
Vapour density	these information are not available
Relative density	these information are not available
Solubility(ies)	
Water solubility	not miscible in any proportion
Partition coefficient	
n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	these information are not available
Relative self-ignition temperature for solids	not relevant (Fluid)
Decomposition temperature	these information are not available
Viscosity	
Kinematic viscosity	these information are not available
Dynamic viscosity	these information are not available

Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Strong exothermic reaction with acids.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

acids, bases, oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
2-aminoethanol	141-43-5	oral	1,089 $^{mg}/_{kg}$
2-aminoethanol	141-43-5	dermal	1,100 $^{mg}/_{kg}$
2-aminoethanol	141-43-5	inhalation: vapour	11 $^{mg}/_{l}$/4h
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	oral	500 $^{mg}/_{kg}$

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	**CAS No**	**Exposure route**	**ATE**
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	dermal	1,100 $^{mg}/_{kg}$

Acute toxicity of components of the mixture							
Name of substance	**CAS No**	**Exposure route**	**End-point**	**Value**	**Species**	**Method**	**Source**
2-(2-butoxyethoxy)ethanol	112-34-5	oral	LD50	2,410 $^{mg}/_{kg}$	mouse, male	OECD Guideline 401	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	dermal	LD50	2,764 $^{mg}/_{kg}$	rabbit, male	OECD Guideline 402	ECHA
2-aminoethanol	141-43-5	oral	LD50	1,089 $^{mg}/_{kg}$	rat	OECD Guideline 401	ECHA
2-aminoethanol	141-43-5	dermal	LD50	2,504 $^{mg}/_{kg}$	rabbit, male	OECD Guideline 402	ECHA
Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-(octyloxy)-	109075-72-1	oral	LD50	>2,000 $^{mg}/_{kg}$	rat	EU method B.1	producer

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.
Respiratory sensitisation
Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	LC50	1,300 $^{mg}/_{l}$	bluegill (lepomis macrochirus)	OECD Guideline 203	ECHA	96 h
2-(2-butoxyethoxy)ethanol	112-34-5	EC50	>100 $^{mg}/_{l}$	daphnia magna	EU method C.2	ECHA	48 h
2-(2-butoxyethoxy)ethanol	112-34-5	ErC50	1,101 $^{mg}/_{l}$	algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA	72 h
2-aminoethanol	141-43-5	LC50	349 $^{mg}/_{l}$	carp (cyprinus carpio)	EU method C.1	ECHA	96 h
2-aminoethanol	141-43-5	EC50	65 $^{mg}/_{l}$	daphnia magna	EU method C.2	ECHA	48 h
2-aminoethanol	141-43-5	ErC50	2.8 $^{mg}/_{l}$	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA	72 h
Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-(octyloxy)-	109075-72-1	LC50	>0.1 – 1 $^{mg}/_{l}$	zebra fish (Danio rerio)	OECD Guideline 203	producer	96 h

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-(octyloxy)-	109075-72-1	EC50	>0.1 – 1 mg/l	daphnia	OECD Guideline 202	producer	48 h
Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-(octyloxy)-	109075-72-1	EC50	>0.1 – 1 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	producer	72 h
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	LC50	0.93 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	producer	96 h
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	EC50	0.049 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	producer	72 h

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	NOEC	>100 mg/l	algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA	96 h
2-(2-butoxyethoxy)ethanol	112-34-5	growth (EbCx) 10%	>1,995 mg/l	microorganisms	OECD Guideline 209	ECHA	30 min
2-aminoethanol	141-43-5	EC50	2.5 mg/l	daphnia magna	OECD Guideline 202	ECHA	21 d
2-aminoethanol	141-43-5	NOEC	0.85 mg/l	daphnia magna	OECD Guideline 202	ECHA	21 d
2-aminoethanol	141-43-5	LOEC	3.55 mg/l	japanese rice-fish/medaka (Oryzias latipes)	OECD Guideline 210	ECHA	41 d

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	NOEC	0.032 $^{mg}/_{l}$	fathead minnow (pimephales promelas)	OECD Guideline 210	producer	34 d
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	NOEC	0.0042 $^{mg}/_{l}$	daphnia	OECD Guideline 211	producer	21 d

12.2 Persistence and degradability

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
2-(2-butoxyethoxy)ethanol	112-34-5	oxygen depletion	85 %	28 d	OECD 301C	ECHA
2-aminoethanol	141-43-5	DOC removal	>90 %	21 d	OECD Guideline 301 A	ECHA

Biodegradation

Data are not available.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
2-(2-butoxyethoxy)ethanol	112-34-5		1 (pH value: 7, 20 °C)
2-aminoethanol	141-43-5	2.3	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

None of the ingredients are listed.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.
Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	**UN number**	2491
14.2	**UN proper shipping name**	ETHANOLAMINE SOLUTION
14.3	**Transport hazard class(es)**	
	Class	8
14.4	**Packing group**	III
14.5	**Environmental hazards**	non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number	2491
Proper shipping name	UN2491, ETHANOLAMINE SOLUTION, 8, III, (E)

Class	8
Classification code	C7
Packing group	III
Danger label(s)	8

Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3.
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2X

International Maritime Dangerous Goods Code (IMDG)

UN number	2491
Proper shipping name	UN2491, ETHANOLAMINE SOLUTION, 8, III
Class	8
Marine pollutant	-
Packing group	III
Danger label(s)	8

Special provisions (SP)	223
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	A
Segregation group	18 - Alkalis.

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	2491
Proper shipping name	UN2491, Ethanolamine solution, 8, III
Class	8
Packing group	III
Danger label(s)	8

Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)

Name of substance	Name acc. to inventory	CAS No	Restriction
SYS-CLEAN MC1.0 Konzentrat/ concentrate	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3
Quaternary ammonium compounds, benzyl-C12-18-alkyldimethyl, chlorides	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3
Poly(oxy-1,2-ethanediyl), .alpha.-butyl-.omega.-(octyloxy)-	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3
2-(2-butoxyethoxy)ethanol	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5	R55
2-(2-butoxyethoxy)ethanol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3
2-aminoethanol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		R3

Legend

R3 1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
- can be used as fuel in decorative oil lamps for supply to the general public, and,
- present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and in-

Legend

delibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
(b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

R55 1. Shall not be placed on the market for the first time after 27 June 2010, for supply to the general public, as a constituent of spray paints or spray cleaners in aerosol dispensers in concentrations equal to or greater than 3 % by weight.
2. Spray paints and spray cleaners in aerosol dispensers containing DEGBE and not conforming to paragraph 1 shall not be placed on the market for supply to the general public after 27 December 2010.
3. Without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that paints other than spray paints containing DEGBE in concentrations equal to or greater than 3 % by weight of that are placed on the market for supply to the general public are visibly, legibly and indelibly marked by 27 December 2010 as follows: 'Do not use in paint spraying equipment'.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

none of the ingredients are listed

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

Regulation 98/2013/EU on the marketing and use of explosives precursors

none of the ingredients are listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
3.2		Hazardous ingredients: change in the listing (table)
8.1		Relevant DNELs of components of the mixture: change in the listing (table)
8.1		Relevant PNECs of components of the mixture: change in the listing (table)

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2017/2398/EU	Directive of the European Parliament and of the Council amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye

Abbr.	Descriptions of used abbreviations
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
IOELV	Indicative occupational exposure limit value
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
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.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.