

Safety Data Sheet

PURGEL

Safety Data Sheet dated: 04/02/2020 - version 2



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

1.1. Product identifier

Mixture identification:

Trade name: PURGEL

Trade code: 9025160

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

Recommended use: N.A.

Uses advised against: N.A.

1.3. Details of the supplier of the safety data sheet

Company: MAPEI AS - Vallsetvegen, 6 - 2120 Sagstua - Norway

Responsible: sicurezza@mapei.it

1.4. Emergency telephone number

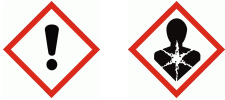
Giftinformasjonen – phone number: +47 22591300

MAPEI AS - phone: +47-62972000

fax: +47-62972099

www.mapei.no (office hours)

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Skin Irrit. 2	Causes skin irritation.
Eye Irrit. 2	Causes serious eye irritation.
Resp. Sens. 1	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	May cause an allergic skin reaction.
Carc. 2	Suspected of causing cancer.
STOT SE 3	May cause respiratory irritation.
STOT RE 2	May cause damage to organs through prolonged or repeated exposure.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) n. 1272/2008 (CLP)

Pictograms and Signal Words



Danger

Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER.

Special Provisions:

EUH204 Contains isocyanates. May produce an allergic reaction.

Contains:

4,4'-methylenediphenyl diisocyanate;
diphenylmethane-4,4'-diisocyanate

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT/vPvB Ingredients are present

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: PURGEL

Hazardous components within the meaning of the CLP regulation and related classification:

Quantity	Name	Ident. Numb.	Classification	Registration Number
≥20 - <25 %	propylene carbonate	CAS:108-32-7 EC:203-572-1 Index:607-194-00-1	Eye Irrit. 2, H319	01-2119537232-48-xxxx
≥10 - <20 %	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS:101-68-8 EC:202-966-0 Index:615-005-00-9	Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1,1A,1B, H334; Skin Sens. 1,1A,1B, H317; STOT RE 2, H373; Carc. 2, H351	01-2119457014-47-XXXX
≥0.49 - <1 %	phosphoric acid ... %, orthophosphoric acid ... %	CAS:7664-38-2 EC:231-633-2 Index:015-011-00-6	Skin Corr. 1B, H314	01-2119485924-24-XXXX

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

6.2. Environmental precautions

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

Limit leakages with earth or sand.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Behaviour Note
propylene carbonate	National	LATVIA		2				
	National	LITHUANIA		7				
	DFG	GERMANY	C			8,5	2	

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	National	NORWAY		0,050	0,005			A 4
	SUVA	NNN		0,020		0,020		
	National	SWEDEN	C	0,030	0,002	0,050	0,005	SWEDEN, Ceiling limit value
	NDS	NNN		0,030				
	NDSP	NNN		0,090				
	ACGIH	NNN			0,005			Resp sens
	National	POLAND		0,030		0,090		
	National	AUSTRIA		0,050	0,005	0,100	0,010	
	DFG	GERMANY	C			0,050		
	ACGIH	NNN			0,005			respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	National	SWEDEN		0,030	0,002			
	National	FRANCE		0,100	0,010	0,200	0,020	
	National	SPAIN		0,052	0,005			
	National	DENMARK		0,050	0,005			
	National	GERMANY		0,050				
	National	PORTUGAL			0,005			
	National	BELGIUM		0,052	0,005			
	NDS	POLAND		0,030				
	NDSch	POLAND				0,090		
	National	CZECH REPUBLIC		0,050				
	National	HUNGARY		0,05		0,050		
	Malaysia OEL	MALAYSIA		0,051	0,005			
	National	ESTONIA		0,050	0,005	0,100	0,010	
National	CZECH REPUBLIC	C			0,100			
National	SLOVAKIA		0,002					
National	SLOVAKIA		0,030					
National	SLOVENIA		0,050		0,050			
National	ROMANIA				0,150			
National	LITHUANIA		0,050	0,005				
National	LITHUANIA	C			0,100	0,010		
phosphoric acid ... %, orthophosphoric acid ... %	National	SWEDEN		1		3		SWEDEN, Short-term value, 15 minutes average value
	National	FINLAND		1		2		
	National	NORWAY		1				
	EU	NNN		1		2		
	National	NORWAY		1		2		
	ACGIH	NNN		1		3		URT, eye and skin irr
	National	POLAND		1		2		
	DFG	GERMANY	C			4		
	ACGIH			1		3		eye, skin and upper respiratory tract irritation
	National	SWEDEN		1				
	National	FRANCE		1	0,2	2	0,5	
	National	SPAIN		1		2		
	National	GREECE		1		3		
	National	DENMARK		1				

National	GERMANY		2		
National	PORTUGAL		1	3	
National	BELGIUM		1	2	
NDS	POLAND		1		
NDSch	POLAND			2	
CHE	SWITZERLAND			2	
NDS	NETHERLANDS		1	2	
National	CZECH REPUBLIC		1		
National	HUNGARY		1	2	
Malaysia OEL	MALAYSIA		1		
National	ESTONIA		1	2	
National	LATVIA		1	2	
National	CZECH REPUBLIC	C		2	
National	SLOVAKIA	C		2	
National	SLOVAKIA		1		
National	SLOVENIA		1	2	
National	UNITED KINGDOM		1	2	
National	BULGARIA		1,0	2,0	
National	ROMANIA		1	2	
TUR	TURKEY		1	2	
National	LITHUANIA		1	2	
National	CROATIA		1	2	
EU			1	2	Indicative

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency	Remark
propylene carbonate	108-32-7	0,09 mg/l	Marine water		
		0,09 mg/l	Fresh Water		
		7400 mg/l	Microorganisms in sewage treatments		
		0,81 mg/kg	Soil		
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	101-68-8	1 mg/l	Fresh Water		
		0,1 mg/l	Marine water		
		1 mg/kg	Soil		
		1 mg/l	Microorganisms in sewage treatments		
		10,000000 mg/l	Intermittent release		

Derived No Effect Level. (DNEL)

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
propylene carbonate	108-32-7			50 mg/kg	Human Dermal	Long Term, systemic effects	
				20 mg/m3	Human Inhalation	Long Term, local effects	
				176 mg/m3	Human Inhalation	Long Term, systemic effects	
				25 mg/kg	Human Dermal	Long Term, systemic effects	
				43,5 mg/m3	Human Inhalation	Long Term, systemic effects	
				25 mg/kg	Human Oral	Long Term, systemic effects	
				10 mg/m3	Human Inhalation	Long Term, local effects	
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	101-68-8			50 mg/kg	Human Dermal	Short Term, systemic effects	
				0,1 mg/m3	Human Inhalation	Short Term, systemic effects	
				0,1 mg/m3	Human Inhalation	Short Term, local effects	
				0,05 mg/m3	Human Inhalation	Long Term, systemic effects	
				0,05 mg/m3	Human Inhalation	Long Term, local effects	
				25 mg/kg	Human Dermal	Short Term, systemic effects	
				0,05 mg/m3	Human Inhalation	Short Term, systemic effects	
				20 mg/kg	Human Oral	Short Term, systemic effects	
				0,05 mg/m3	Human Inhalation	Short Term, local effects	
				0,025 mg/m3	Human Inhalation	Long Term, systemic effects	
				0,025 mg/m3	Human Inhalation	Long Term, local effects	
phosphoric acid ... %, orthophosphoric acid ... %	7664-38-2			28,7 mg/cm2	17,2 mg/cm2	Human Dermal	Short Term, local effects
				2,92 mg/m3	0,73 mg/m3	Human Inhalation	Long Term, local effects

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN 374:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Nitrile rubber - NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 480\text{min}$.

Butyl rubber - IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Fluorinated rubber - FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 480\text{min}$.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

In case of insufficient ventilation use mask with ABEKP filters (EN 14387).

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Hygienic and Technical measures

N.A.

Appropriate engineering controls:

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance and colour: Liquid light brown

Odour: Odourless

Odour threshold: N.A.

pH: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: N.A.

Flash point: 125 °C (257 °F)

Evaporation rate: N.A.

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: N.A.

Solubility in water: N.A.

Partition coefficient (n-octanol/water): N.A. - This product is a mixture

Auto-ignition temperature: 455.00 °C - No explosive or spontaneous ignition in contact with air at room temperature

Decomposition temperature: N.A.

Viscosity: 400.00 cPs

Explosive properties: N.A. - No components with explosive properties

Oxidizing properties: N.A. - No component with oxidizing properties

Solid/gas flammability: N.A.

9.2. Other information

No additional information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

propylene carbonate	a) acute toxicity	LD50 Oral Rat 33520 mg/kg LD50 Skin Rabbit > 2000 mg/kg LD50 Skin Rabbit > 3000 mg/kg LD50 Oral Rat = 29000 mg/kg	
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg LD50 Skin Rabbit > 9400 mg/kg LC50 Inhalation Dust Rat = 0,368 mg/l 4h LC50 Inhalation Rat = 369 mg/m3 4h LD50 Oral Rat = 31600 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Skin Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Skin Mouse Positive Respiratory Sensitization Inhalation Positive	
	f) carcinogenicity	Carcinogenicity Inhalation Rat = 6 mg/m3	2 y
	g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m3	20 d
phosphoric acid ... %, orthophosphoric acid ... %	a) acute toxicity	LD50 Oral Rat mg/kg LC50 Inhalation Rat 1,69 mg/l 1h LD50 Skin Rabbit 2,740 mg/kg LD50 Skin Rabbit = 2740 mg/kg LC50 Inhalation Rat > 850 mg/m3 1h LD50 Oral Rat = 1530 mg/kg	

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- Toxicological kinetics, metabolism and distribution information
- i) STOT-repeated exposure
- j) aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
propylene carbonate	CAS: 108-32-7 - EINECS: 203-572-1 - INDEX: 607-194-00-1	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 48 a) Aquatic acute toxicity : EC50 Algae > 900 mg/L 72

a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio > 1000 mg/L 96h IUCLID

a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna > 500 mg/L 48h IUCLID

a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus > 500 mg/L 72h IUCLID

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

CAS: 101-68-8 - EINECS: 202-966-0 - INDEX: 615-005-00-9
a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96

a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24

b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d

a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72

c) Bacteria toxicity : EC50 > 100 mg/L 3

d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d

e) Plant toxicity : NOEC > 1000 mg/kg - 14 d

a) Aquatic acute toxicity : LC50 Fish = 138 mg/L 96

phosphoric acid ... %, orthophosphoric acid ... %

CAS: 7664-38-2 - EINECS: 231-633-2 - INDEX: 015-011-00-6

a) Aquatic acute toxicity : EC50 Daphnia = 0,492 mg/L 48

a) Aquatic acute toxicity : EC50 Algae = 0,72 mg/L 72

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Product:

Do not dispose of waste into sewers.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to an authorized waste disposal service.

Contaminated packaging:

Empty remaining content.

Dispose of as unused product.

Do not re-use empty containers.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number

N.A.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

Road and Rail (ADR-RID) :

N.A.

Air (IATA) :

N.A.

Sea (IMDG) :

N.A.

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

N.A.

SECTION 15: Regulatory information

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

VOC (2004/42/EC) : N.A. g/l

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EU) 2015/830

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

German Water Hazard Class.

N.A.

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 56

SVHC Substances:

No data available

Produktregisteret Norge: 17193

MAL-kode: 00-3(1993)

15.2. Chemical safety assessment

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

SECTION 16: Other information

Code	Description
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.

Code	Hazard class and hazard category	Description
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.1/1	Resp. Sens. 1	Respiratory Sensitisation, Category 1
3.4.1/1-1A-1B	Resp. Sens. 1,1A,1B	Respiratory Sensitisation, Category 1,1A,1B
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1-1A-1B	Skin Sens. 1,1A,1B	Skin Sensitisation, Category 1,1A,1B
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

3.2/2	Calculation method
3.3/2	Calculation method
3.4.1/1	Calculation method
3.4.2/1	Calculation method
3.6/2	Calculation method
3.8/3	Calculation method
3.9/2	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- 5. FIRE-FIGHTING MEASURES
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 13. DISPOSAL CONSIDERATIONS
- 15. REGULATORY INFORMATION