Version: 1.3 Product number: 184525 Revision Date: 04.01.2023
Print Date: 05.01.2023

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

1.1 Product identifier

Product number	184525
Product name	AZ nLOF® 2070 Photoresist

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

Use of the Substance/Mixture	:	Materials for use in technical applications

1.3 Details of the supplier of the safety data sheet

Company Responsible Department	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0 * e-mail: ELECTRONICS_SDS@merckgroup.com

1.4 Emergency telephone number

+49 6151 722440

CHEMTREC International Emergency Telephone Number +1 703-741-5970 [CCN 842835]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Hazardous components which must be listed on the label:

2-methoxy-1-methylethyl acetate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Organic mixture in:
Solvent

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2-methoxy-1-methylethyl acetate	108-65-6 203-603-9 607-195-00-7 01-2119475791-29-xxxx	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)	>= 50 - <= 100
Hexakis(methoxymethyl)melamine	3089-11-0 221-422-3	Eye Irrit. 2; H319	>= 1 - < 10
2,2',4,4'-tetrahydroxybenzophenone	131-55-5 205-028-9	Acute Tox. 4; H302	>= 1 - < 10

1,3-Benzenedimethanol, 2-hydroxy-5-(1,1,3,3-tetramethylbutyl)-	5568-04-7	Acute Tox. 4; H302	>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : fresh air. Call in physician.

In case of skin contact : rinse out with polyethylene glycol 400 or a mixture of polyethylene glycol 300/ethanol 2:1 and wash with plenty of water. If neither is available wash with plenty of water. Immediately take off contaminated clothing. Seek medical advice immediately.

In case of eye contact : rinse out with plenty of water.

Remove contact lenses.

If swallowed : caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : somnolence
Drowsiness

Nausea
Vomiting
Headache
Unconsciousness
narcosis
Cyanosis

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water
Foam
Carbon dioxide (CO2)
Dry powder

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Combustible.

Vapours are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : Cool closed containers exposed to fire with water spray.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:
Do not breathe vapours, aerosols.
Avoid substance contact.
Ensure adequate ventilation.
Keep away from heat and sources of ignition.
Evacuate the danger area, observe emergency procedures, consult an expert.
Advice for emergency responders:
Protective equipment see section 8.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up with liquid-absorbent material (e.g. Chemizorb®).
Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Observe label precautions.
Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Hygiene measures	:	Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in original container.
Further information on storage conditions	:	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Protected from light. Risks from decomposition products: see section 10.3
Recommended storage temperature	:	If there is a suitable storage temperature range to be complied with, product label contains the relevant information accordingly.

7.3 Specific end use(s)

Specific use(s)	:	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
2-methoxy-1-methylethyl acetate	Workers	dermal	Long-term systemic effects	153,5 mg/kg
	Workers	inhalation	Long-term systemic effects	275 mg/m3

	Consumers	oral	Long-term systemic effects	1,67 mg/kg
	Consumers	dermal	Long-term systemic effects	54,8 mg/kg
	Consumers	inhalation	Long-term systemic effects	33 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
2-methoxy-1-methylethyl acetate	Fresh water	0,635 mg/l
	Marine water	0,0635 mg/l
	Fresh water sediment	3,29 mg/kg
	Marine sediment	0,329 mg/kg
	Sewage treatment plant	100 mg/l
	Soil	0,29 mg/kg

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Personal protective equipment

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye protection : Safety glasses

Hand protection :

splash contact

Glove material : Nitrile rubber

Glove thickness : 0,4 mm

Break through time : 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example:KCL 730 Camatril® -Velours(splash contact)
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection : required when vapours/aerosols are generated.

Filter type : ABEK-filter

Protective measures : Flame retardant antistatic protective clothing.

Environmental exposure controls

Water : Do not flush into surface water or sanitary sewer system. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	yellow
Odour	:	strong, characteristic
Freezing point	:	No data available
Boiling point	:	145 °C
Flammability	:	Remarks: Combustible.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	43 °C Method: closed cup
Auto-ignition temperature	:	
		Information on components: 2-methoxy-1-methylethyl acetate 333 °C (1.013 hPa)
Decomposition temperature	:	No data available
pH	:	substance/mixture is non-polar/aprotic
Viscosity		
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	partly soluble - phase separation
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	approximately 2,9 hPa

Density	:	ca. 1,07 g/cm3
Relative vapour density	:	No data available

9.2 Other information

Explosives	:	Not classified as explosive.
Oxidizing properties	:	none

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapour/air-mixtures are explosive at intense warming.
Formation of peroxides possible.

10.2 Chemical stability

Sensitivity to light
Sensitive to air.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Violent reactions possible with: alkalines Peroxides Strong oxidizing agents Risk of ignition or formation of inflammable gases or vapours with: Oxidizing agents

10.4 Conditions to avoid

Conditions to avoid	:	Heating.

10.5 Incompatible materials

Materials to avoid	:	various plastics

10.6 Hazardous decomposition products

Peroxides
in the event of fire: See section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity	:	Acute Toxicity Estimate (ATE): > 2.000 mg/kg Method: Calculation method

Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available
Acute toxicity (other routes of administration)	:	No data available

Components:

2-methoxy-1-methylethyl acetate:

Acute oral toxicity	:	LD50 (Rat, male and female): 6.190 mg/kg Method: OECD Test Guideline 401 GLP: yes Remarks: (ECHA)
Acute inhalation toxicity	:	LC0 (Rat): > 8,1 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Converted acute toxicity point estimate Assessment: The substance or mixture has no acute inhalation toxicity Remarks: (ECHA)
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: (ECHA) Assessment: The substance or mixture has no acute dermal toxicity

Hexakis(methoxymethyl)melamine:

Acute oral toxicity	:	Assessment: Toxic effects cannot be excluded
Acute inhalation toxicity	:	Assessment: Toxic effects cannot be excluded
Acute dermal toxicity	:	Assessment: Toxic effects cannot be excluded

2,2',4,4'-tetrahydroxybenzophenone:

Acute oral toxicity	:	LD50 (Rat): 1.220 mg/kg Remarks: (RTECS) Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity	:	Assessment: Toxic effects cannot be excluded
Acute dermal toxicity	:	Assessment: Toxic effects cannot be excluded

1,3-Benzenedimethanol, 2-hydroxy-5-(1,1,3,3-tetramethylbutyl)-:

Acute oral toxicity	:	LD50 (Rat, female): approximately 500 mg/kg

Method: OECD Test Guideline 423
GLP: yes
Remarks: (own results)

Acute inhalation toxicity : Assessment: Toxic effects cannot be excluded

Acute dermal toxicity : Assessment: Toxic effects cannot be excluded

Skin corrosion/irritation

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
Remarks	:	(ECHA)

Serious eye damage/eye irritation

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	(ECHA)

Hexakis(methoxymethyl)melamine:

Species	:	Rabbit
Result	:	irritating
Remarks	:	(Lit.)

Respiratory or skin sensitisation

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Test Type	:	Maximisation Test
Exposure routes	:	dermal
Species	:	Guinea pig

Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.
GLP	:	yes
Remarks	:	(ECHA)

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	No data available
Genotoxicity in vivo	:	No data available

Components:

2-methoxy-1-methylethyl acetate:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes Remarks: (ECHA)

Carcinogenicity

Product:

No data available

Reproductive toxicity

Product:

Effects on fertility	:	No data available
Effects on foetal development	:	No data available

Components:

2-methoxy-1-methylethyl acetate:

Effects on foetal development	:	Species: Rat, female Application Route: Inhalation General Toxicity Maternal: NOAEL: 2,7 mg/l Teratogenicity: NOAEL: > 22,5 mg/l Method: OECD Test Guideline 414 GLP: yes Remarks: (ECHA)

STOT - single exposure

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Assessment	:	May cause drowsiness or dizziness.
Remarks	:	(ECHA)

STOT - repeated exposure

Product:

No data available

Repeated dose toxicity

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Species	:	Rat, male and female
NOAEL	:	>= 1.000 mg/kg
Application Route	:	Oral
Exposure time	:	44 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 422
Remarks	:	(ECHA) Subacute toxicity

Aspiration toxicity

Product:

No data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

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

Further information

Product:

Remarks	:	Properties to be expected based on the main component of the mixture: Nausea Vomiting Headache

Unconsciousness
narcosis
Cyanosis
Risk of aspiration upon vomiting.
Aspiration may cause pulmonary oedema and pneumonitis.

Remarks : Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 134 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 408 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
Remarks: (ECHA)

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
Remarks: (ECHA)

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
Remarks: (ECHA)

Toxicity to microorganisms : EC10 (activated sludge): > 1.000 mg/l
Exposure time: 30 min

Test Type: static test
Method: OECD Test Guideline 209
Remarks: (ECHA)

EC20 (activated sludge): > 1.000 mg/l
Exposure time: 30 min
Test Type: static test
Method: OECD Test Guideline 209
Remarks: (ECHA)

Toxicity to fish (Chronic toxicity) : NOEC: 47,5 mg/l
Exposure time: 14 d
Species: Oryzias latipes (Orange-red killifish)
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 204
GLP: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: >= 100 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes
Remarks: (ECHA)

12.2 Persistence and degradability

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 76,4 mg/l
Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: (ECHA)

Biochemical Oxygen Demand (BOD) : 330 mg/g
Incubation time: 5 d
Remarks: (IUCLID)

Chemical Oxygen Demand (COD) : 1.740 mg/g
Remarks: (IUCLID)

ThOD : 1.820 mg/g
Remarks: (IUCLID)

12.3 Bioaccumulative potential

Product:

No data available

Components:

2-methoxy-1-methylethyl acetate:

Partition coefficient: n-octanol/water : log Pow: 1,2 (20 °C)
Method: OECD Test Guideline 117
Remarks: Bioaccumulation is not expected.
(ECHA)

Hexakis(methoxymethyl)melamine:

Partition coefficient: n-octanol/water : log Pow: 1,61
Method: (calculated)
Remarks: EPI Suite™
Bioaccumulation is not expected.

2,2',4,4'-tetrahydroxybenzophenone:

Partition coefficient: n-octanol/water : log Pow: 3,1 (25 °C)
Method: (calculated)
Remarks: Bioaccumulation is not expected.

1,3-Benzenedimethanol, 2-hydroxy-5-(1,1,3,3-tetramethylbutyl)-:

Partition coefficient: n-octanol/water : log Pow: 2,53
Method: (calculated)
Remarks: EPI Suite™
Bioaccumulation is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

2-methoxy-1-methylethyl acetate:

Assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Endocrine disrupting properties

Product:

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

12.7 Other adverse effects

Product:

Additional ecological information : Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste should not be disposed of by release to sewers.

SECTION 14: Transport information

Air transport (IATA)

14.1. UN/ID No.	:	UN 1993
14.2. Proper shipping name	:	Flammable liquid, n.o.s. (2-methoxy-1-methylethyl acetate)
14.3. Class	:	3
14.4. Packing group	:	III
14.5 Environmentally hazardous	:	--
14.6 Special precautions for user	:	no

Sea transport (IMDG)

14.1. UN number	:	UN 1993
14.2. Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate)
14.3. Class	:	3
14.4. Packing group	:	III
14.5 Environmentally hazardous	:	--
14.6 Special precautions for user	:	yes
EmS Code	:	F-E, S-E

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

Land transport (ADR/RID)

14.1. UN number	:	UN 1993
14.2. Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate)
14.3. Class	:	3
14.4. Packing group	:	III
14.5 Environmentally hazardous	:	--
14.6 Special precautions for user	:	yes
Tunnel restriction code	:	(D/E)

Inland waterway transport (ADN)
ADN Classification : Not Assigned

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3 formaldehyde (Number on list 72, 28)
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P5c	FLAMMABLE LIQUIDS

Storage class (TRGS 510) : 3, Flammable liquids

Other regulations:

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H302	:	Harmful if swallowed.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
STOT SE	:	Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization;

KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm3).

Revision Note

Safety datasheet sections which have been updated : General revision

Classification of the mixture:		**Classification procedure:**
Flam. Liq. 3	H226	Based on product data or assessment
STOT SE 3	H336	Calculation method

Disclaimer

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

REG_EU / EN