

1.1. Product identifier

#### Mixture identification: Trade name: Ink Cartridge, T2670 1.2. Relevant identified uses of the substance or mixture and uses advised against Recommended use: Ink for inkjet printing 1.3. Details of the supplier of the safety data sheet Company: EPSON EUROPE B.V. Azie building, Atlas ArenA, Hoogoorddreef 5,1101 BA Amsterdam Zuidoost The Netherlands Phone number: +31-20-314-5000 Competent person responsible for the safety data sheet: chemicals@epson-europe.com Date: 19/10/2016 Revision: 10 1.4. Emergency telephone number Phone number: +31-20-314-5000 United Kingdom; 01952 607111 Monday to Friday 9am to 5:30pm. Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department. **SECTION 2: Hazards identification** 2.1. Classification of the substance or mixture

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

- - EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

- No other hazards
- 2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP). Hazard pictograms:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

EUH210 Safety data sheet available on request.

EUH208 Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

EUH208 Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

#### Special provisions according to Annex XVII of REACH and subsequent amendments: None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

- Other Hazards:
  - No other hazards



# SECTION 3: Composition/information on ingredients 3.1. Substances

- - No
- 3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification: <Cyan ink>

Qty	Name	Ident. Numb	er	Classification
50% ~ 65%	Water	CAS: EC:	7732-18-5 231-791-2	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
7% ~ 10%	Glycerol	CAS: EC:	56-81-5 200-289-5	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
1% ~ 3%	2-[2-(2-butoxyethoxy)et hoxy]ethanol; TEGBE; triethylene glycol monobutyl ether	Index number: CAS: EC: REACH No.:	603-183-00-0 143-22-6 205-592-6 01-21194751 07-38	
0.25% ~ 0.5%	2,4,7,9-tetramethyldec- 5-yne-4,7-diol	CAS: EC:	126-86-3 204-809-1	<ul> <li>3.3/1 Eye Dam. 1 H318</li> <li>3.4.2/1B Skin Sens. 1B H317</li> <li>4.1/C3 Aquatic Chronic 3 H412</li> </ul>
0.1% ~ 0.25%	Triethanol amine	CAS: EC:	102-71-6 203-049-8	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

### <Magenta ink>

Qty	Name	Ident. Numb	er	Classification
50% ~ 65%	Water	CAS: EC:	7732-18-5 231-791-2	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
5% ~ 7%	Glycerol	CAS: EC:	56-81-5 200-289-5	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
1% ~ 3%	2-[2-(2-butoxyethoxy)et hoxy]ethanol; TEGBE; triethylene glycol monobutyl ether	Index number: CAS: EC: REACH No.:	603-183-00-0 143-22-6 205-592-6 01-21194751 07-38	� 3.3/1 Eye Dam. 1 H318
0.25% ~ 0.5%	2,4,7,9-tetramethyldec- 5-yne-4,7-diol	CAS: EC:	126-86-3 204-809-1	<ul> <li>3.3/1 Eye Dam. 1 H318</li> <li>3.4.2/1B Skin Sens. 1B H317</li> <li>4.1/C3 Aquatic Chronic 3 H412</li> </ul>
0.1% ~ 0.25%	Triethanol amine	CAS: EC:	102-71-6 203-049-8	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).



Qty	Name	Ident. Numb	er	Classification
50% ~ 65%	Water	CAS: EC:	7732-18-5 231-791-2	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
7% ~ 10%	Glycerol	CAS: EC:	56-81-5 200-289-5	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
1% ~ 3%	2-[2-(2-butoxyethoxy)et hoxy]ethanol; TEGBE; triethylene glycol monobutyl ether	number: CAS: EC:	603-183-00-0 143-22-6 205-592-6 01-21194751 07-38	较 3.3/1 Eye Dam. 1 H318
1% ~ 3%	Triethanol amine	CAS: EC:	102-71-6 203-049-8	The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).
0.25% ~ 0.5%	2,4,7,9-tetramethyldec- 5-yne-4,7-diol	CAS: EC:	126-86-3 204-809-1	<ul> <li>3.3/1 Eye Dam. 1 H318</li> <li>3.4.2/1B Skin Sens. 1B H317</li> <li>4.1/C3 Aquatic Chronic 3 H412</li> </ul>
< 0.05%	1,2-benzisothiazol-3(2 H)-one; 1,2-benzisothiazolin-3- one	Index number: CAS: EC:	613-088-00-6 2634-33-5 220-120-9	<ul> <li>3.1/4/Oral Acute Tox. 4 H302</li> <li>3.2/2 Skin Irrit. 2 H315</li> <li>3.3/1 Eye Dam. 1 H318</li> <li>3.4.2/1-1A-1B Skin Sens.</li> <li>1,1A,1B H317</li> <li>4.1/A1 Aquatic Acute 1 H400</li> </ul>

# **SECTION 4: First aid measures**

- 4.1. Description of first aid measures
  - In case of skin contact:
    - Wash with plenty of water and soap.
  - In case of eyes contact:
    - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - In case of Ingestion:
    - Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.
  - In case of Inhalation:
    - Remove casualty to fresh air and keep warm and at rest.
- 4.2. Most important symptoms and effects, both acute and delayed None
- 4.3. Indication of any immediate medical attention and special treatment needed Treatment:

None

### **SECTION 5: Firefighting measures**

- 5.1. Extinguishing media
  - Suitable extinguishing media: Water. Carbon dioxide (CO2).

T2670\_en Page n. 3 of 11



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.

Burning produces heavy smoke.

- 5.3. Advice for firefighters
  - Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

#### **SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures Wear personal protection equipment. Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

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. 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)
  - None in particular

### **SECTION 8: Exposure controls/personal protection**

8.1. Control parameters

Glycerol - CAS: 56-81-5

- OEL Type: OSHA - LTE: 5 mg/m3 - Notes: PEL, as mist, respirable fraction

- OEL Type: OSHA - LTE: 15 mg/m3 - Notes: PEL, as mist, total dust

- **DNEL Exposure Limit Values** 
  - No data available
- PNEC Exposure Limit Values

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6

Target: Fresh Water - Value: 1.5 mg/l

Target: Freshwater sediments - Value: 5.77 mg/kg

Target: Marine water - Value: 0.15 mg/l

T2670\_en Page n. 4 of 11 Version 8.0 Revison 1.0



Target: Marine water sediments - Value: 0.13 mg/kg

Target: Microorganisms in sewage treatments - Value: 200 mg/l

2,4,7,9-tetramethyldec-5-yne-4,7-diol - CAS: 126-86-3

Target: Fresh Water - Value: 0.04 mg/l

Target: Marine water - Value: 0.004 mg/l

Target: Freshwater sediments - Value: 0.32 mg/kg

Target: Marine water sediments - Value: 0.032 mg/kg

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices. Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None Appropriate engineering controls:

None

### **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties Appearance and colour: Cyan, Magenta, Yellow Liquid Odour: Slightly Odour threshold: No data available at 20 °C pH: (Cyan ink) 7.9 ~ 8.9 at 20 °C (Magenta ink) 7.8 ~ 8.8 8.4 ~ 9.4 (Yellow ink) at 20 °C Melting point / freezing point: No data available Initial boiling point and boiling range: No data available Solid/gas flammability: No data available Upper/lower flammability or explosive limits: No data available Vapour density: No data available Flash point: (Cyan ink) No data available (Magenta ink) No data available Does not flash until 100 °C / 212 ° F (Yellow) (Cleveland open cup method, JIS K2265-4) Evaporation rate: No data available No data available Vapour pressure: Relative density: No data available Solubility in water: Complete Solubility in oil: No data available Partition coefficient (n-octanol/water): No data available Auto-ignition temperature: No data available Decomposition temperature: No data available < 5 mPa⋅s at 20 °C Viscosity: Explosive properties: No data available Oxidizing properties: No data available 9.2. Other information Miscibility: No data available Fat Solubility: No data available



Conductivity:

No data available

# **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 product:
    - <Cyan, Magenta Ink>
      - f) carcinogenicity:
        - Does not contain carcinogens (Ref. 1)
        - g) reproductive toxicity:
          - Does not contain reproductive toxicity and developmental toxic substances (Ref. 2)
  - Toxicological information of the main substances found in the mixture:
    - Glycerol CAS: 56-81-5
    - a) acute toxicity:

Test: LD50 - Route: Oral - Species: Guinea pig = 7750 mg/kg - Source: Journal of Industrial Hygiene and Toxicology. Vol. 23, Pg. 259, 1941

Test: LDLo - Route: Oral - Species: Human = 1428 mg/kg - Source: "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 288, 1969.

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6

a) acute toxicity:

Test: LD50 - Route: Dermal - Species: Rabbit = 3.54 ml/kg - Source: American Industrial Hygiene Association Journal. Vol. 23, Pg. 95, 1962.

Test: LD50 - Route: Oral - Species: Rat = 5300 mg/kg - Source: Office of Toxic Substances Report. Vol. OTS,

- 2,4,7,9-tetramethyldec-5-yne-4,7-diol CAS: 126-86-3
- a) acute toxicity:
  - Test: LD50 Route: Dermal Species: Rat > 2000 mg/kg
- b) skin corrosion/irritation:
  - Test: Skin Irritant Species: Rabbit Mild irritant
- c) serious eye damage/irritation:
  - Test: Eye Irritant Species: Rabbit Highly irritating
- d) respiratory or skin sensitisation:

Test: Skin Sensitisation - Route: LLNA - Species: Mouse Sensitiser e) germ cell mutagenicity:

- Test: Mutagenesis Species: Salmonella Typhimurium Negative Triethanol amine - CAS: 102-71-6
- a) acute toxicity:



Test: LD50 - Route: Oral - Species: Guinea pig = 2200 mg/kg - Source: "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982Vol. -, Pg. 114, 1982.

Test: LD50 - Route: Oral - Species: Mouse = 5846 mg/kg - Source: Science Reports of the Research Institutes, Tohoku University, Series C: Medicine. Vol. 36(1-4), Pg. 10, 1989.

If not differently specified, the information required in Regulation (EU) 2015/830 listed below must be considered as 'No data available':

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;

i) STOT-repeated exposure;

j) aspiration hazard.

#### <Yellow ink>

No data available

Toxicological information of the main substances found in the mixture:

Glycerol - CAS: 56-81-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Guinea pig = 7750 mg/kg - Source: Journal of Industrial Hygiene and Toxicology. Vol. 23, Pg. 259, 1941

Test: LDLo - Route: Oral - Species: Human = 1428 mg/kg - Source: "Toxicology of Drugs and Chemicals," Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 288, 1969. - Notes: BEHAVIORAL: HEADACHE GASTROINTESTINAL: NAUSEA OR VOMITING

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether - CAS: 143-22-6

a) acute toxicity:

Test: LD50 - Route: Dermal - Species: Rabbit = 3.54 ml/kg - Source: American Industrial Hygiene Association Journal. Vol. 23, Pg. 95, 1962.

Test: LD50 - Route: Oral - Species: Rat = 5300 mg/kg - Source: Office of Toxic Substances Report. Vol. OTS,

Triethanol amine - CAS: 102-71-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Guinea pig = 2200 mg/kg - Source: "Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure," Izmerov, N.F., et al., Moscow, Centre of International Projects, GKNT, 1982Vol. -, Pg. 114, 1982.

Test: LD50 - Route: Oral - Species: Mouse = 5846 mg/kg - Source: Science Reports of the Research Institutes, Tohoku University, Series C: Medicine. Vol. 36(1-4), Pg. 10, 1989. - Notes: GASTROINTESTINAL: "HYPERMOTILITY, DIARRHEA" KIDNEY, URETER, AND BLADDER: OTHER CHANGES BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD

2,4,7,9-tetramethyldec-5-yne-4,7-diol - CAS: 126-86-3

a) acute toxicity:

Test: LD50 - Route: Dermal - Species: Rat > 2000 mg/kg - Notes: OECD TG No.402



b) skin corrosion/irritation:

Test: Skin Irritant - Species: Rabbit Mild irritant - Notes: OECD TG No.404 c) serious eye damage/irritation:

Test: Eye Irritant - Species: Rabbit Highly irritating - Notes: EPA OTS 798.4500 d) respiratory or skin sensitisation:

Test: Skin Sensitisation - Route: LLNA - Species: Mouse Sensitiser - Notes: OECD TG No.429

- e) germ cell mutagenicity:
  - Test: Mutagenesis Species: Salmonella Typhimurium Negative Notes: OECD TG No.471

If not differently specified, the information required in Regulation (EU) 2015/830 listed below must be considered as 'No data available':

- 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;
- 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. 2,4,7,9-tetramethyldec-5-yne-4,7-diol - CAS: 126-86-3

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 36 mg/l - Duration h: 96 - Notes: OECD TG No.203 Endpoint: EC50 - Species: Daphnia = 88 mg/l - Duration h: 48 - Notes: OECD TG No.202

- Endpoint: EC50 Species: Algae = 15 mg/l Duration h: 72 Notes: OECD TG No.201 c) Bacteria toxicity:
  - Endpoint: EC50 Species: activated sludge = mg/l Notes: OECD TG No.209
- 12.2. Persistence and degradability
  - No data available
- 12.3. Bioaccumulative potential
- No data available
- 12.4. Mobility in soil
  - No data available
- 12.5. Results of PBT and vPvB assessment
  - vPvB Substances: None PBT Substances: None
- 12.6. Other adverse effects None

# **SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

### **SECTION 14: Transport information**

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

T2670\_en Page n. 8 of 11 Version 8.0 Revison 1.0



- 14.2. UN proper shipping name No data available
- 14.3. Transport hazard class(es) No data available
- 14.4. Packing group No data available
- 14.5. Environmental hazards No data available
- 14.6. Special precautions for user No data available
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code No data available

### **SECTION 15: Regulatory information**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture 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 (EC) n. 1272/2008 (CLP) Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013 Regulation (EU) 2015/830 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) 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: No restriction. Restrictions related to the substances contained: No restriction. Where applicable, refer to the following regulatory provisions : Directive 2003/105/CE ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Provisions related to directives 82/501/EC(Seveso), 96/82/EC(Seveso II):

No data available

15.2. Chemical safety assessment

No

### **SECTION 16: Other information**

<Cyan, Magenta ink>

Full text of phrases referred to in Section 3:

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Hazard class and hazard category	Code	Description
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Skin Sens. 1B	3.4.2/1B	Skin Sensitisation, Category 1B
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Version 8.0 Revison 1.0



This safety data sheet has been completely updated in compliance to Regulation 2015/830. 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

CCNL - Appendix 1

Ref. 1 •IARC Monographs on the Evaluation Carcinogenic Risks to Humans (IARC: International Agency for Research on Cancer)

Journal of Occupational Health (JOH) (Japan Society of Occupational Health (JSOH))
TLVs and BEIs (ACGIH: American Conference of Governmental Industrial Hygienists)
IRIS Carcinogenic Assessment (IRIS: Integrated Risk Information System of US EPA)
National Toxicology Program (NTP) Report on Carcinogens
Annex VI of REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC

and 1999/45/EC, and amending Regulation (EC) No 1907/2006 •MAK und BAT Werte Liste (DFG: German Research Foundation) •TRGS 905, Verzeichnis krebserzeugender, keimzell mutagener oder reproduktionstoxischer Stoffe (AGS: Committee on Hazardous Substances, Germany)

Ref. 2 ·Annex VI of REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 ·TRGS 905, Verzeichnis krebserzeugender, keimzell mutagener oder reproduktionstoxischer Stoffe (AGS: Committee on Hazardous Substances, Germany)

<Yellow ink>

Full text of phrases referred to in Section 3:

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H400 Very toxic to aquatic life.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Skin Sens. 1,1A,1B	3.4.2/1-1A-1B	Skin Sensitisation, Category 1,1A,1B
Skin Sens. 1B	3.4.2/1B	Skin Sensitisation, Category 1B
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2015/830. 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

CCNL - Appendix 1

Insert further consulted bibliography

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 Safety Data Sheet cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
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.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
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).
WGK:	German Water Hazard Class.