

Safety Data Sheet dated 4/7/2019, version 6

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

1.1. Product identifier

Mixture identification:

Trade name: SIGILLANTE VERDE

Trade code: 0090

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

Recommended use:

Anaerobic sealing adhesive

Uses advised against:

No-one in particular.

1.3. Details of the supplier of the safety data sheet

Supplier:

Arexons S.p.A.

via Antica di Cassano, 23, 20063

Cernusco sul Naviglio (MI), Italy

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Competent person responsible for the safety data sheet:

arexons@arexons.it

1.4. Emergency telephone number

Arexons S.p.A.

Tel. +39 (0)2/924361 - Fax +39 (0)2/92436306

Centro Antiveleni di Pavia IRCCS- Fondazione Maugeri tel. +39 (0)382 24444 (h24; it, en)

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

In Ireland: Beaumont Hospital - National Poisons Information Centre 01 809 2166 (7days, 8:00 -

22:00)

In South Africa: Poison Information Helpline 0861 555 777

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

- Warning, Eye Irrit. 2, Causes serious eye irritation.
- Warning, Skin Sens. 1, May cause an allergic skin reaction.
- Warning, STOT SE 3, May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

0090/6

Page n. 1 of 12



P103 Read label before use.

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

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

None

Contains

HYDROXYPROPYL METHACRYLATE

cumene hydroperoxide

2-HYDROXYETHYL METHACRYLATE: 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

N.A.

3.2. Mixtures

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

>= 7% - < 10% HYDROXYPROPYL METHACRYLATE

REACH No.: 01-2119490226-37, CAS: 27813-02-1, EC: 248-666-3

◆ 3.4.2/1 Skin Sens. 1 H317

3.3/2 Eye Irrit. 2 H319

>= 1% - < 2% cumene hydroperoxide

REACH No.: 01-2119475796-19, Index number: 617-002-00-8, CAS: 80-15-9, EC: 201-254-7

- 2.15/F Org. Perox. F H242
- ♦ 3.3/1 Eye Dam. 1 H318
- 3.1/4/Oral Acute Tox. 4 H302
- 1 3.1/4/Dermal Acute Tox. 4 H312
- ♦ 3.1/3/Inhal Acute Tox. 3 H331
- ♦ 3.2/1A Skin Corr. 1A H314
- ♦ 3.9/2 STOT RE 2 H373
- 4.1/C2 Aquatic Chronic 2 H411

Specific Concentration Limits:

1% <= C < 3%: Eye Irrit. 2 H319

1% <= C < 10%: STOT SE 3 H335

3% <= C < 10%: Skin Irrit. 2 H315

3% <= C < 10%: Eye Dam. 1 H318 C >= 10%: Skin Corr. 1B H314

>= 0.5% - < 1% 2-HYDROXYETHYL METHACRYLATE

REACH No.: 01-2119490169-29, CAS: 868-77-9, EC: 212-782-2

1 3.2/2 Skin Irrit. 2 H315

1.3/2 Eye Irrit. 2 H319

0090/6



1 3.4.2/1 Skin Sens. 1 H317

>= 0.5% - < 1% ethylene glycol

REACH No.: 01-2119456816-28, Index number: 603-027-00-1, CAS: 107-21-1, EC: 203-473-3

◆ 3.1/4/Oral Acute Tox. 4 H302

♦ 3.9/2 STOT RE 2 H373

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediately and dispose off 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 opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

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

In case of inhalation: move the patient to a well-ventilated area and keep at rest. In case of ingestion: rinse mouth thoroughly with water. Ensure the person drinks plenty of water. Do not induce vomiting. Contact a physician.

In case of contact with skin: wash with soap and water and rinse with plenty of water. In case of contact with eyes: rinse with plenty of running water. Contact a physician if the irritation persists.

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:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media:

Foam

To carbon dioxide.

To dust.

Not Recommended Extinguishing Media:

To water

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.

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

0090/6

Page n. 3 of 12



Wear personal protection equipment.

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

Provide adequate ventilation.

Use appropriate respiratory protection.

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.

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.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Do not store this material near food and drinks.

Store in well-closed containers, preferably in a cool place, away from sources of heat and direct sunlight.

Keep away from food, drink and feed.

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Non deve essere utilizzato in giunzioni a contatto con ossigeno puro o vapore.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

cumene hydroperoxide - CAS: 80-15-9

20101.09 - TWA(8h): 100 mg/m3, 20 ppm - STEL: 250 mg/m3, 50 ppm

20101.10 - TWA(8h): 100 mg/m3, 20 ppm - STEL: 250 mg/m3, 50 ppm

ethanediol - CAS: 107-21-1

20101.06 - TWA(8h): 52 mg/m3, 20 ppm - STEL: 104 mg/m3, 40 ppm

EU - TWA(8h): 52 mg/m3, 20 ppm - STEL: 104 mg/m3, 40 ppm - Notes: Skin

ACGIH - STEL: 10 mg/m3 - Notes: (I, H), A4 - URT irr

ACGIH - TWA(8h): 25 ppm - STEL: 50 ppm - Notes: (V), A4 - URT irr

DNEL Exposure Limit Values

HYDROXYPROPYL METHACRYLATE - CAS: 27813-02-1

Worker Industry: 14.7 mg/m3 - Worker Professional: 14.7 mg/m3 - Consumer: 8.8 mg/m3

- Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 4.2 mg/kg - Worker Professional: 4.2 mg/kg - Consumer: 2.5 mg/kg -

Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 2.5 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects cumene hydroperoxide - CAS: 80-15-9

0090/6



Worker Industry: 6 mg/m3 - Worker Professional: 6 mg/m3 - Exposure: Human Inhalation 2-HYDROXYETHYL METHACRYLATE - CAS: 868-77-9

Worker Industry: 4.9 mg/m3 - Worker Professional: 4.9 mg/m3 - Consumer: 2.9 mg/m3 -

Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 1.3 mg/kg - Worker Professional: 1.3 mg/kg - Consumer: 830 μg/kg -

Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 830 µg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects ethanediol - CAS: 107-21-1

Worker Industry: 35 mg/m3 - Worker Professional: 35 mg/m3 - Consumer: 7 mg/m3 -

Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 106 mg/kg - Worker Professional: 106 mg/kg - Consumer: 53 mg/kg -

Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

HYDROXYPROPYL METHACRYLATE - CAS: 27813-02-1

Target: Marine water - Value: 904 03 Target: Fresh Water - Value: 904 03

Target: 08 - Value: 972 03 Target: 09 - Value: 10 mg/l

Target: Freshwater sediments - Value: 6.28 mg/kg

cumene hydroperoxide - CAS: 80-15-9

Target: Fresh Water - Value: 3.1 03 Target: Marine water - Value: 310 03

Target: 08 - Value: 31 03 Target: 09 - Value: 350 03

Target: Freshwater sediments - Value: 23 03

2-HYDROXYETHYL METHACRYLATE - CAS: 868-77-9

Target: Fresh Water - Value: 482 03

Target: 08 - Value: 1 mg/l

Target: Marine water - Value: 482 03

Target: 09 - Value: 10 mg/l

Target: Freshwater sediments - Value: 3.79 mg/kg

ethanediol - CAS: 107-21-1

Target: Fresh Water - Value: 10 mg/l

Target: 08 - Value: 10 mg/l

Target: Marine water - Value: 1 mg/l

Target: 09 - Value: 199.5 mg/l

Target: Freshwater sediments - Value: 3.7 mg/kg

8.2. Exposure controls

Eye protection:

Anti-splash goggles

Face protection shield.

Compliant with EN 166

Protection for skin:

Chemical protection clothing.

Protection for hands:

Suitable gloves type:

Nitrile or Viton gloves.

Compliant with EN 374.

Respiratory protection:

Not required under normal conditions of use.

In case of insufficient ventilation, use adequate respiratory protection equipment.

Filter for organic vapours. Type A. (EN14387)

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

0090/6

Page n. 5 of 12



SECTION 9: Physical and chemical properties9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid viscoso Green		
Odour:	Characteristic		
Odour threshold:	N.A.		
pH:	N.A.		
Melting point / freezing point:	N.A.		
Initial boiling point and boiling range:	N.A.		
Flash point:	>100°C		
Evaporation rate:	N.A.		
Solid/gas flammability:	N.A.		
Upper/lower flammability or explosive limits:	N.A.		
Vapour pressure:	N.A.		
Vapour density:	N.A.		
Relative density:	1.1		
Solubility in water:	leggermente Soluble in acqua		
Solubility in oil:	N.A.		
Partition coefficient (n-octanol/water):	N.A.		
Auto-ignition temperature:	N.A.		
Decomposition temperature:	N.A.		
Viscosity:	50000 mPas @25°C		
Explosive properties:	N.A.		
Oxidizing properties:	N.A.		

9.2. Other information



Properties	Value	Method:	Notes:
Miscibility:	N.A.		
Fat Solubility:	N.A.		
Conductivity:	N.A.		
Substance Groups relevant properties	N.A.		

NA=not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Strong oxidising agents.

10.2. Chemical stability

Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Avoid lack of air and contamination with metals.

10.5. Incompatible materials

Metals and their salts.

Free radical initiators.

10.6. Hazardous decomposition products

Thermal decomposition may result in carbon monoxide, carbon dioxide and other unidentified organic compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

SIĞILLANTE VERDE

a) acute toxicity

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

The product is classified: Eye Irrit. 2 H319

Test: Eye Irritant Positive

d) respiratory or skin sensitisation

The product is classified: Skin Sens. 1 H317

Test: Inhalation Sesitization Negative - Based on available data, the classification criteria are not met

Test: Skin Sensitization Positive

e) germ cell mutagenicity

Based on available data, the classification criteria are not met

f) carcinogenicity

Based on available data, the classification criteria are not met g) reproductive toxicity

0090/6



```
Based on available data, the classification criteria are not met
      h) STOT-single exposure
            The product is classified: STOT SE 3 H335
            Test: Respiratory Tract Irritant - Route: Inhalation Positive
      i) STOT-repeated exposure
            Based on available data, the classification criteria are not met
     j) aspiration hazard
            Based on available data, the classification criteria are not met
Toxicological information of the main substances found in the product:
      HYDROXYPROPYL METHACRYLATE - CAS: 27813-02-1
      a) acute toxicity:
            Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
            Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg
      i) STOT-repeated exposure:
            Test: NOAEL - Route: Oral - Species: Rat > 300 mg/kg
      cumene hydroperoxide - CAS: 80-15-9
      a) acute toxicity:
            Test: LD50 - Route: Oral - Species: Rat 382 mg/kg - Duration: 4h
            Test: LC50 - Route: Inhalation - Species: Rat 220 Ppm - Duration: 4h
            Test: LD50 - Route: Skin - Species: Rat 550 mg/kg - Duration: 4h
      2-HYDROXYETHYL METHACRYLATE - CAS: 868-77-9
      a) acute toxicity:
            Test: LD50 - Route: Oral - Species: Rat 5564 mg/kg
            Test: LD50 - Route: Skin - Species: Rabbit > 3000 mg/kg
      ethanediol - CAS: 107-21-1
      a) acute toxicity:
            Test: LD50 - Route: Oral - Species: Rat = 7712 mg/kg
            Test: LD50 - Route: Skin - Species: Mouse > 3500 mg/kg
            Test: LC50 - Route: Inhalation - Species: Rat > 2.5 mg/l - Duration: 4h
            Test: LD50 - Route: Skin - Species: Rabbit = 2000 mg/kg
      g) reproductive toxicity:
            Test: NOAEL(C) - Species: Mouse 1000 mg/kg
```

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. HYDROXYPROPYL METHACRYLATE - CAS: 27813-02-1

Test: NOAEL(C) - Route: Skin - Species: CANE 2200-4400 mg/kg - Source: OECD 410 -

a) Aquatic acute toxicity:

i) STOT-repeated exposure:

Endpoint: LC50 - Species: Fish 493 mg/l - Duration h: 48 Endpoint: EC50 - Species: Daphnia 380 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae > 97.2 mg/l - Duration h: 72 Endpoint: NOEC - Species: Algae 97.2 mg/l - Duration h: 72

Notes: Organo bersaglio/Target organ: Rene/kidney

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia 24.1 mg/l - Duration h: 504

cumene hydroperoxide - CAS: 80-15-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 3.9 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia 16 mg/l - Duration h: 24

2-HYDROXYETHYL METHACRYLATE - CAS: 868-77-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 227 mg/l - Duration h: 96



ethanediol - CAS: 107-21-1 a) Aquatic acute toxicity:

> Endpoint: LC50 - Species: Fish = 72860 mg/l - Duration h: 96 Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48 Endpoint: EC50 - Species: Algae 6500-13000 mg/l - Duration h: 96

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish 15380 mg/l - Duration h: 168

12.2. Persistence and degradability

None

HYDROXYPROPYL METHACRYLATE - CAS: 27813-02-1

Biodegradability: 4 - Duration: 28gg - %: 94.2

2-HYDROXYETHYL METHACRYLATE - CAS: 868-77-9

Biodegradability: 4 - Duration: 28gg - %: 84

12.3. Bioaccumulative potential

2-HYDROXYETHYL METHACRYLATE - CAS: 868-77-9

Bioaccumulation: Bioaccumulative - Test: BCF - Bioconcentrantion factor 1.44

12.4. Mobility in soil

N.A.

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. Additional disposal information:

CER 08 04 09 adhesives or sealants containing organic solvents or other dangerous substances.

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

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

ADR-Enviromental Pollutant: No IMDG-Marine pollutant: No

14.6. Special precautions for user

ŃΑ

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

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)

0090/6

Page n. 9 of 12



```
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)

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)

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:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Pronto all'Uso

Volatile Organic compounds - VOCs = 2.50 %

Volatile Organic compounds - VOCs = 25.00 g/Kg

Volatile CMR substances = 0.00 %

Halogenated VOCs which are assigned the risk phrase R40 = 0.00 %

Organic Carbon - C = 1.44

Where applicable, refer to the following regulatory provisions:

Directive 2012/18/EU (Seveso III)

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

Dir. 2004/42/EC (VOC directive)

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

Seveso III category according to Annex 1, part 1

None

15.2. Chemical safety assessment

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

Substances for which a Chemical Safety Assessment has been carried out:

None

SECTION 16: Other information

Text of phrases referred to under heading 3:

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H242 Heating may cause a fire.

H318 Causes serious eye damage.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

H335 May cause respiratory irritation.

H315 Causes skin irritation.

H373 May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed.



Hazard class and hazard category	Code	Description
Org. Perox. F	2.15/F	Organic peroxide, Type F
Acute Tox. 3	3.1/3/Inhal	Acute toxicity (inhalation), Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

Paragraphs modified from the previous revision:

SECTION 3: Composition/information on ingredients

SECTION 7: Handling and storage

SECTION 8: Exposure controls/personal protection

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
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H335	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 MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

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.

NA: Not applicable

PNEC: Predicted No Effect Concentration.

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.
TWA: Time-weighted average
WGK: German Water Hazard Class.