

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 17.04.2018

Version number 1801

Revision: 13.02.2018

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

1.1 Product identifier

Trade name: **Graconol**
 Article number: 5360-0349

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

Application of the substance / the mixture: No further relevant information available.
 Lubricant
 Cleaning material/ Detergent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Manufacturer
 Graichen Produktions- und Vertiebs-GmbH
 Darmstädter Str. 127 - 129
 D-64625 Bensheim
 Tel.: +49(0)6251/73103
 Fax: +49(0)6251/77901
 e-mail: ehs@graichen-bensheim.de
 homepage: http://www.graichen.net

Further information obtainable from: Environment protection department

1.4 Emergency telephone number:

Advice centre for poisoning university Mainz phone +49(0)6131/19240
 or poison information: +49(0)700/GIFTINFO

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
 Flam. Liq. 2 H225 Highly flammable liquid and vapour.
 Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
 Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02 GHS07

Signal word: Danger

Hazard statements: H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P243 Take precautionary measures against static discharge.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment
 PBT: Not applicable.
 vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6	ethanol	☞ Flam. Liq. 2, H225; ☞ Eye Irrit. 2, H319	50-100%
CAS: 78-93-3 EINECS: 201-159-0	butanone	☞ Flam. Liq. 2, H225; ☞ Eye Irrit. 2, H319; STOT SE 3, H336	<2.5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Take affected persons out of danger area and lay down.

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- . After inhalation: Take affected persons into fresh air and keep quiet.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- . After skin contact: If skin irritation continues, consult a doctor.
Immediately rinse with water.
- . After eye contact: Rinse opened eye for several minutes under running water.
Protect unharmed eye.
Call a doctor immediately.
- . After swallowing: Rinse out mouth and then drink plenty of water.
Call for a doctor immediately.
A person vomiting while laying on their back should be turned onto their side.
Do not induce vomiting; call for medical help immediately.

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

Gastric or intestinal disorders
Nausea
Dizziness
Unconsciousness

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

No further relevant information available.

SECTION 5: Firefighting measures

- . 5.1 Extinguishing media** CO₂
Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
For safety reasons unsuitable extinguishing agents: Water with full jet
- . 5.2 Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
In case of fire, the following can be released:
Carbondioxid (CO₂)
Carbon monoxide (CO)
- . 5.3 Advice for firefighters**
Gefährdete Behälter mit wasser kühlen. Kontaminiertes Löschwasser entsprechend den behördlichen Vorschriften entsorgen.
- . Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

- . 6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- . 6.2 Environmental precautions:** Keep people at a distance and stay on the windward side.
Inform respective authorities in case of seepage into water course or sewage system.
In case of seepage into the ground inform responsible authorities.
- . 6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
Ensure adequate ventilation.
- . 6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- . 7.1 Precautions for safe handling** Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Ensure that suitable extractors are available on processing machines
Use only in well ventilated areas.
Prevent formation of aerosols.
- . Information about fire - and explosion protection: Use only in explosion protected area.
Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- . 7.2 Conditions for safe storage, including any incompatibilities**
- . Storage:
Requirements to be met by storerooms and receptacles: Provide solvent resistant, sealed floor.
Store in a cool location.
- . Information about storage in one common storage facility: Store away from foodstuffs.

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- . Further information about storage conditions: Store away from oxidising agents.
Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventilated area.
- . Storage class: inflammable liquid substance
- . **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- . Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

- . Ingredients with limit values that require monitoring at the workplace:

64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm

78-93-3 butanone

WEL Short-term value: 899 mg/m³, 300 ppm
Long-term value: 600 mg/m³, 200 ppm
Sk, BMGV

- . DNELs

64-17-5 ethanol

Oral	DNEL Long-term - systemic effects	87 mg/kg bw/day (general (Allgemeinbevölkerung))
Dermal	DNEL Long-term - systemic effects	206 mg/kg bw/day (general (Allgemeinbevölkerung))
		343 mg/kg bw/day (worker (Arbeitnehmer))
Inhalative	DNEL Acute - local effects	950 mg/m ³ (general (Allgemeinbevölkerung))
		1,900 mg/m ³ (worker (Arbeitnehmer))
	DNEL Long-term - systemic effects	114 mg/m ³ (general (Allgemeinbevölkerung)) 950 mg/m ³ (worker (Arbeitnehmer))

67-63-0 propan-2-ol

Oral	DNEL Long-term - systemic effects	26 mg/kg bw/day (general (Allgemeinbevölkerung))
Dermal	DNEL Long-term - systemic effects	319 mg/kg bw/day (general (Allgemeinbevölkerung))
		888 mg/kg bw/day (worker (Arbeitnehmer))
Inhalative	DNEL Long-term - systemic effects	89 mg/m ³ (general (Allgemeinbevölkerung))
		500 mg/m ³ (employee / Arbeitnehmer) 500 mg/m ³ (worker (Arbeitnehmer))

- . PNECs

64-17-5 ethanol

PNEC Soil (Boden)	0.63 mg/kg
PNEC fresh water sediment (Süßwassersediment)	3.6 mg/kg
PNEC fresh water (Süßwasser)	0.96 mg/l
PNEC marine water sediment	2.9 mg/kg
PNEC Marine water	0.79 mg/l
PNEC-STP	580 mg/l

67-63-0 propan-2-ol

PNEC Soil (Boden)	28 mg/kg
PNEC fresh water sediment (Süßwassersediment)	552 mg/kg
PNEC fresh water (Süßwasser)	140.9 mg/l
PNEC marine water sediment	552 mg/kg
PNEC Marine water	140.9 mg/l
PNEC-STP	2,251 mg/l

- . Ingredients with biological limit values:

78-93-3 butanone

BMGV 70 µmol/L
Medium: urine
Sampling time: post shift
Parameter: butan-2-one

- . Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

- . Personal protective equipment:
. General protective and hygienic measures: Wash hands before breaks and at the end of work.
- . Respiratory protection: Not required.
- . Protection of hands: Solvent resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- . Material of gloves Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- . Penetration time of glove material Value for the permeation: Level \leq 0,7 mm 480min (8h) EN374
The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- . Eye protection: Tightly sealed goggles

SECTION 9: Physical and chemical properties

. 9.1 Information on basic physical and chemical properties

. General Information

. Appearance:

- | | |
|--------------------|-----------------|
| Form: | Fluid |
| Colour: | Colourless |
| . Odour: | Like alcohol |
| . Odour threshold: | Not determined. |

. pH-value:	Not determined.
-------------	-----------------

. Change in condition

- | | |
|--|-----------|
| Melting point/freezing point: | -114.5 °C |
| Initial boiling point and boiling range: | 78 °C |

. Flash point:	13 °C
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. Flammability (solid, gas):	Not applicable.
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. Ignition temperature:	425 °C
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. Decomposition temperature:	Not determined.
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. Auto-ignition temperature:	Product is not selfigniting.
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. Explosive properties:	Not determined.
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. Explosion limits:

- | | |
|--------|-----------|
| Lower: | 3.5 Vol % |
| Upper: | 15 Vol % |

. Vapour pressure at 20 °C:	57 hPa
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- | | |
|---------------------|--------------------------|
| . Density at 20 °C: | 0.7901 g/cm ³ |
| . Relative density | Not determined. |
| . Vapour density | Not determined. |
| . Evaporation rate | Not determined. |

. Solubility in / Miscibility with water:	Not miscible or difficult to mix.
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. Partition coefficient: n-octanol/water:	Not determined.
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. Viscosity:

- | | |
|-------------------|-----------------|
| Dynamic at 20 °C: | 1.2 mPas |
| Kinematic: | Not determined. |

. Solvent content:

- | | |
|-------------------|----------|
| Organic solvents: | 100.0 % |
| VOC (EC) | 100.00 % |

Solids content:	0.0 %
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. 9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

. 10.1 Reactivity

No further relevant information available.

. 10.2 Chemical stability

. Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

. 10.3 Possibility of hazardous reactions

No dangerous reactions known.

. 10.4 Conditions to avoid

No further relevant information available.

. 10.5 Incompatible materials:

No further relevant information available.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

64-17-5 ethanol

Oral	LD50	10,470 mg/kg (rat) (Acute Oral Toxicity)
Dermal	LD50	>2,000 mg/kg (rabbit) (Acute Dermal Toxicity)
Inhalative	LC50/4h	51 mg/l (rat) (Acute Inhalation Toxicity)

78-93-3 butanone

Oral	LD50	2,193 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rabbit) (Acute Dermal Toxicity)
Inhalative	LC50/4h	34 mg/l (mouse) (Acute Dermal Toxicity)

67-63-0 propan-2-ol

Oral	LD50	5,840 mg/kg (rat) (Acute Oral Toxicity)
Dermal	LD50	12,870 mg/kg (rab) (Acute Dermal Toxicity)
Inhalative	LC50/4h	72.6 mg/l (rat)
	LC50/6h	>25 mg/l (rat) (Acute Inhalation Toxicity)

Primary irritant effect:

Skin corrosion/irritation

64-17-5 ethanol

Ätz-/Reizwirkung auf die Haut (rabbit) (Acute Dermal Irritation/Corrosion)

67-63-0 propan-2-ol

Ätz-/Reizwirkung auf die Haut (4h) (rabbit) (Acute Dermal Irritation/Corrosion)

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

64-17-5 ethanol

Schwere Augenschädigung/-reizung (rabbit) (Acute Eye Irritation/Corrosion)

67-63-0 propan-2-ol

Schwere Augenschädigung/-reizung (rabbit) (Acute Eye Irritation/Corrosion)

Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Additional toxicological information:

67-63-0 propan-2-ol

NOAEL, maternal	400 mg/kg KG/day (rat)
NOAEL, parents	500 mg/kg KG/day (Two-Generation Reproduction Toxicity)
	853 mg/kg KG/day (rat) (One-Generation Reproduction Toxicity Study)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity

67-63-0 propan-2-ol

Oral NOAEL, Parents 500 mg/kg (rat) (Two-Generation Reproduction Toxicity)

Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure

67-63-0 propan-2-ol

STOT RE mg/kg/day (rat)

Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

64-17-5 ethanol

EC50	5,800 mg/l (Paramecium caudatum)
EC50 (24h)	858 mg/l (Artemia salina)
EC50 (7d)	>5,000 mg/l (Algae) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
EC50 (48h)	9,268-14,221 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia sp. Acute Immobilisation Test)
EC50 (72h)	275 mg/l (Chlorella vulgaris) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
LC50 (24h)	11,200 mg/l (Salmo gairdneri)
LC50 (48h)	5,012 mg/l (Ceriodaphnia dubia)
LC50 (96h)	13,000 mg/l (Oncorhynchus mykiss) (Fish, Acute Toxicity Test)

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NOEC (10d)	14,200 mg/l (Pimephales promelas (fettköpf. Ellritze))
	2 mg/l (Daphnie)

78-93-3 butanone

EC50 (48h)	308 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia sp. Acute Immobilisation Test)
EC50 (72h)	1,972 mg/l (Pseudokirchnerella subcapitata - Algen) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
EC50 (16h)	1,150 mg/l (Pseudomonas putida)
LC50 (96h)	2,993 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)

67-63-0 propan-2-ol

EC50	>100 mg/l (Bacteria)
EC50 (72h)	>100 mg/l (Scenedesmus subspicatus)
EC50 (96h)	>1,000 mg/l (Scenedesmus subspicatus) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
LC50 (24h)	9,714 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia sp. Acute Immobilisation Test)
	9,640 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)
LC50 (96h)	>9,640-10,000 mg/l (Pimephales promelas (fettköpf. Ellritze)) (Fish, Acute Toxicity Test)
LOEC (8d)	1,000 mg/l (Algae)
EC50 (3h)	>1,000 mg/l (activated sludge) (Mikroorganismen/Wirkung auf Belebtschlamm)
NOEC (21d)	30 mg/l (daphnia magna/gr. Wasserfloh) (Daphnia magna Reproduction Test)
NOEC (96h)	1,000 mg/l (Scenedesmus subspicatus) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)

12.2 Persistence and degradability**64-17-5 ethanol**

Biodegradability	80-85 % (aerob) (Biodegradability)
Biodegradability 28d	97 % (Ready Biodegradability)

78-93-3 butanone

Biodegradability 28d	98 % (Biodegradability)
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67-63-0 propan-2-ol

Biodegradability 30d	70-84 % (aerob) ((Derterm. of the "Ready" Biodegr. Closed Bottle))
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12.3 Bioaccumulative potential**64-17-5 ethanol**

Log Pow	0.66
Log Kow	
BCF	

78-93-3 butanone

Log Kow	0.3
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67-63-0 propan-2-ol

Log Pow	0.05
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12.4 Mobility in soil No further relevant information available.**Ecotoxicological effects:****64-17-5 ethanol**

EC10 (72h)	11.5 mg/l (Paramaecium caudatum) (Freshwater Alga and Cyanobacteria, Growth Inhibiti)
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Additional ecological information:

- General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

- PBT:** Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

- Recommendation:** Must be specially treated adhering to official regulations.
Uncleaned packaging:
Recommendation: Non contaminated packagings may be treated like household garbage.

SECTION 14: Transport information**14.1 UN-Number**

- ADR, IMDG, IATA** UN1993

14.2 UN proper shipping name

- ADR** 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION))
IMDG FLAMMABLE LIQUID, N.O.S. (ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION))

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. IATA	FLAMMABLE LIQUID, N.O.S. (ETHANOL SOLUTION)
. 14.3 Transport hazard class(es)	
. ADR	
	
. Class	3 (F1) Flammable liquids.
. Label	3

. IMDG, IATA	
	
. Class	3 Flammable liquids.
. Label	3
. 14.4 Packing group	
. ADR, IMDG, IATA	II
. 14.5 Environmental hazards:	
. Marine pollutant:	No
. 14.6 Special precautions for user	
. Danger code (Kemler):	Warning: Flammable liquids. 33
. EMS Number:	F-E, S-E
. Stowage Category	B
. 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	
	Not applicable.

. Transport/Additional information:	
. ADR	
. Limited quantities (LQ)	1L
. Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
. Transport category	2
. Tunnel restriction code	D/E

. IMDG	
. Limited quantities (LQ)	1L
. Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
. UN "Model Regulation":	
	UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)), 3, II

SECTION 15: Regulatory information

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

- . Directive 2012/18/EU
- . Named dangerous substances - ANNEX I
- . Seveso category
- . Qualifying quantity (tonnes) for the application of lower-tier requirements
- . Qualifying quantity (tonnes) for the application of upper-tier requirements
- . REGULATION (EC) No 1907/2006 ANNEX XVII
- . Conditions of restriction: 3

. 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- . Department issuing SDS: Environment protection department.
- . Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

. * Data compared to the previous
version altered.

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