

## GlucoTain Flex

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Version : 7 - 0 / USA

Revision Date: 11/21/2024  
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## SECTION 1. IDENTIFICATION

<b>Identification of the company:</b>	Clariant Corporation 500 East Morehead Street Charlotte, NC, 28202 Telephone No.: +1 704 331 7000
	<b>Information of the substance/preparation:</b> Product Stewardship, +1-704-331-7710 e-mail: SDS.NORAM@clariant.com
	<b>Emergency tel. number:</b> +1 800-424-9300 CHEMTREC

**Trade name:** GlucoTain Flex  
**Material number:** 277626

**Primary product use:** Raw material for cosmetics  
**Chemical family:** Glucamide in aqueous-glycolic solution

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Serious eye damage : Category 1

**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

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.

**Prevention:**

P280 Wear eye protection/ face protection.

**Response:**

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

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**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.	287735-50-6	<b>&gt;= 30 - &lt; 50</b>
Propylene Glycol	57-55-6	<b>&gt;= 1 - &lt; 5</b>
Citric acid	77-92-9	<b>&gt;= 1 - &lt; 5</b>
Methanol	67-56-1	<b>&gt;= 0.1 - &lt; 1</b>

The specific chemical identity and/or the exact percentage of composition of a hazardous ingredient is being withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

- General advice : Remove/ Take off immediately all contaminated clothing.
- If inhaled : Move the victim to fresh air.  
Give oxygen or artificial respiration if needed.  
Get immediate medical advice/ attention.  
Never give anything by mouth to an unconscious person.
- In case of skin contact : Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.
- In case of eye contact : Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.
- If swallowed : Rinse mouth.  
Do NOT induce vomiting.  
Never give anything by mouth to an unconscious person.  
Get medical advice/ attention.
- Most important symptoms and effects, both acute and delayed : The possible symptoms known are those derived from the labelling (see section 2).  
Causes serious eye damage.
- Notes to physician : Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray jet  
Alcohol-resistant foam

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- Dry powder  
Carbon dioxide (CO<sub>2</sub>)
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:  
  
Nitrogen oxides (NO<sub>x</sub>)  
  
Carbon monoxide
- Further information : Wear full protective clothing and self-contained breathing apparatus.
- Special protective equipment for firefighters : Self-contained breathing apparatus
- Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Wear suitable protective equipment.  
Refer to protective measures listed in sections 7 and 8.  
Avoid contact with skin, eyes and clothing.  
Contain spill. Ensure adequate ventilation and wear appropriate personal protective equipment. Collect onto inert absorbent. Place in sealable container. Do not allow to contaminate water sources or sewers.
- Environmental precautions : Do not allow to enter drains or waterways  
  
Do not allow contact with soil, surface or ground water.  
Prevent product from entering drains.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Observe the general rules of industrial fire protection
- Advice on safe handling : Use only with adequate ventilation and proper protective eyewear, gloves, and clothing.  
Wash thoroughly after handling.

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Handle in accordance with good industrial hygiene and safety practice.

Use only with adequate ventilation/personal protection.

For personal protection see section 8.

Avoid contact with skin, eyes and clothing.

Use only with adequate ventilation.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Further information on storage conditions : Keep container closed.  
Store in a cool, dry, well-ventilated area. Keep container sealed when not in use.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propylene Glycol	57-55-6	TWA	10 mg/m3	US WEEL

Contains no substances with occupational exposure limit values.

**Engineering measures** : A system of local and/or general exhaust is recommended where employee exposures are at or above Occupational Exposure Limits (OEL).

## Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection  
Remarks : Wear protective gloves. PVC Nitrile rubber Neoprene gloves  
Impervious butyl rubber gloves

Eye protection : Chemical splash goggles with face shield.

Skin and body protection : Wear suitable protective equipment.  
Wear protective clothing, including long sleeves and gloves, to prevent skin contact.  
Wear suitable protective equipment.

Protective measures : Avoid contact with skin and eyes.

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Hygiene measures : Wash hands before breaks and at the end of workday.  
Use protective skin cream before handling the product.  
Take off immediately all contaminated clothing and wash it before reuse.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid, clear

Colour : yellowish, clear

Odour : characteristic

Odour Threshold : not determined

pH : 5 - 7 (95 °F / 35 °C)  
Concentration: 1 %

Melting point : approx. 99.5 °F / 37.5 °C

Boiling point : approx. 212 °F / 100 °C  
Based on water-content.

Flash point : (for a component of this mixture) not determined

Evaporation rate : not determined

Flammability (solid, gas) : The product is not flammable.  
Remarks: Information based on the active ingredient.

Self-ignition : > 275 °F / > 135 °C

Burning number : 1  
Does not catch fire

Upper explosion limit / upper flammability limit : not tested.

Lower explosion limit / Lower flammability limit : not tested.

Vapour pressure : 2.3 hPa (77 °F / 25 °C)  
Corresp. to vapour pressure of water

Relative vapour density : no data available

Density : approx. 1.025 g/cm<sup>3</sup> (122 °F / 50 °C)  
Method: DIN 51757

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Solubility(ies)	
Water solubility	: soluble (104 °F / 40 °C)
Solubility in other solvents	: 35 g/l (68 °F / 20 °C) Data corresponds to that of the active component Solvent: 1-octanol Method: OECD Test Guideline 105
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: not tested.
Decomposition temperature	: > 392 °F / > 200 °C Heating rate: 3 K/min Method: DSC
Viscosity	
Viscosity, dynamic	: not tested.
Viscosity, kinematic	: no data available
Explosive properties	: Not explosive
Oxidizing properties	: There are no chemical groups associated with oxidising properties present in the molecule.
Surface tension	: 44 mN/m, 68 °F / 20 °C, Data corresponds to that of the active component
Metal corrosion rate	: Not applicable
Particle size	: Not applicable

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use. Stable
Conditions to avoid	: None known.
Incompatible materials	: not known
Hazardous decomposition products	: When handled and stored appropriately, no dangerous decomposition products are known

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**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Eye contact  
Ingestion  
Inhalation  
Skin contact

**Acute toxicity**

Not classified

**Product:**

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: By analogy with a product of similar composition
- Acute inhalation toxicity : Acute toxicity estimate: > 200 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Remarks: By analogy with a product of similar composition

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

- Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: Information refers to the main component.
- Acute inhalation toxicity : Remarks: Not applicable
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg  
Method: Directive 67/548/EEC, Annex V, B.3.  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity

**Propylene Glycol:**

- Acute oral toxicity : LD50 (Rat, male and female): 22,000 mg/kg  
Method: Other  
GLP: no
- Acute inhalation toxicity : LC50 (Rabbit, no data available): > 317.042 mg/l  
Exposure time: 2 h  
Test atmosphere: dust/mist  
Method: Other

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GLP: no

Acute dermal toxicity : LD50 (Rabbit, no data available): > 2,000 mg/kg  
Method: Other  
GLP: no  
Assessment: The substance or mixture has no acute dermal toxicity

### **Citric acid:**

Acute oral toxicity : LD50 (Mouse, male and female): 5,400 mg/kg  
Method: OECD Test Guideline 401  
GLP: no  
Remarks: No significant adverse effects were reported

Acute inhalation toxicity : Remarks: not required

Acute dermal toxicity : LC50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity

### **Methanol:**

Acute oral toxicity : LD50 (Rat, male and female): 1,187 - 2,769 mg/kg  
Method: Other  
GLP: no  
Assessment: The component/mixture is toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat, male and female): 87.5 mg/l  
Exposure time: 6 h  
Test atmosphere: vapour  
Method: Other  
GLP: no  
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity : Assessment: The component/mixture is toxic after single contact with skin.

### **Skin corrosion/irritation**

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

### **Product:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation  
Remarks : By analogy with a product of similar composition

### **Components:**

**D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

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Species : Rabbit  
Exposure time : 4 h  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : yes

**Propylene Glycol:**

Species : Rabbit  
Exposure time : 4 h  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : No information available.

**Citric acid:**

Species : Rabbit  
Exposure time : 4 h  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : yes

**Methanol:**

Species : Rabbit  
Exposure time : <= 20 h  
Method : Other  
Result : No skin irritation  
GLP : no

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Species : rabbit eye  
Result : Risk of serious damage to eyes.  
Method : OECD Test Guideline 405  
Remarks : By analogy with a product of similar composition

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Species : Rabbit  
Result : Risk of serious damage to eyes.  
Exposure time : 35 d  
Assessment : Risk of serious damage to eyes.  
Method : OECD Test Guideline 405  
GLP : yes

**Propylene Glycol:**

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405

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GLP : No information available.

**Citric acid:**

Species : rabbit eye  
Assessment : Irritating to eyes.  
Method : OECD Test Guideline 405  
GLP : yes

**Methanol:**

Species : Rabbit  
Result : No eye irritation  
Method : Other  
GLP : no

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified

**Respiratory sensitisation**

Not classified

**Product:**

Method : OECD Test Guideline 406  
Result : non-sensitizing  
Remarks : By analogy with a product of similar composition

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Test Type : Buehler Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Not a skin sensitizer.  
GLP : yes

Test Type : Guinea pig maximization test  
Species : Guinea pig  
Method : Magnusson/Kligman  
Result : Not a skin sensitizer.  
GLP : yes

Assessment : Causes serious eye damage.

**Propylene Glycol:**

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Dermal  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : Not a skin sensitizer.  
GLP : No information available.

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Test Type : Maximisation Test  
Exposure routes : Dermal  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Not a skin sensitizer.  
GLP : No information available.

**Citric acid:**

Exposure routes : Dermal  
Result : Not a skin sensitizer.  
Remarks : not required

Assessment : Causes serious eye irritation.

**Methanol:**

Test Type : Maximisation Test  
Exposure routes : Dermal  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Not a skin sensitizer.  
GLP : no

Assessment : Toxic if swallowed, in contact with skin or if inhaled.

**Germ cell mutagenicity**

Not classified

**Product:**

Germ cell mutagenicity - : Not mutagenic in Ames Test  
Assessment Remarks: By analogy with a product of similar composition

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella typhimurium  
Concentration: 45 - 2250 µg/plate  
Metabolic activation: with and without metabolic activation  
Method: Ames test  
Result: negative  
GLP: yes  
Remarks: Information refers to the main component.

Test Type: Mutagenicity (Escherichia coli - reverse mutation assay)  
Test system: Escherichia coli  
Concentration: 15 - 1500 µg/plate  
Metabolic activation: with and without metabolic activation  
Method: Ames test  
Result: negative

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GLP: yes

Remarks: Information refers to the main component.

Test Type: Ames test

Test system: Salmonella typhimurium

Concentration: 1,5 - 450 µg/plate

Metabolic activation: with and without metabolic activation

Method: Ames test

Result: negative

GLP: yes

Remarks: Information refers to the main component.

Test Type: Mutagenicity (Escherichia coli - reverse mutation assay)

Test system: Escherichia coli

Concentration: 15 - 2250 µg/plate

Metabolic activation: with and without metabolic activation

Method: Ames test

Result: negative

GLP: yes

Remarks: Information refers to the main component.

Test system: Chinese hamster ovary cells

Concentration: 0,0065 - 0,1 mg/ml

Metabolic activation: with and without metabolic activation

Method: Other

Result: negative

GLP: yes

Remarks: Information refers to the main component.

Test Type: Mouse lymphoma assay

Test system: mouse lymphoma cells

Concentration: 2,3 - 45 µg/ml

Metabolic activation: with and without metabolic activation

Method: Other

Result: negative

GLP: yes

Remarks: Information refers to the main component.

Genotoxicity in vivo

: Test Type: Cytogenetic assay  
Species: Rat (male)  
Strain: Sprague-Dawley  
Cell type: Bone marrow cells  
Application Route: oral (gavage)  
Exposure time: 6 - 12 h  
Dose: 180 - 600 - 1800 mg/kg  
Method: Other  
Result: negative  
GLP: yes

Test Type: Cytogenetic assay  
Species: Rat (female)  
Strain: Sprague-Dawley  
Cell type: Bone marrow cells

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Application Route: oral (gavage)

Exposure time: 6 - 12 h

Dose: 210 - 700 - 2100 mg/kg

Method: Other

Result: negative

GLP: yes

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

### Propylene Glycol:

Genotoxicity in vitro

: Test Type: Ames test  
Test system: Salmonella typhimurium  
Concentration: <= 10 mg/plate  
Metabolic activation: with  
Method: Ames test  
Result: negative  
GLP: No information available.

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Concentration: 7,4 - 3810 µg/ml

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

GLP: yes

Genotoxicity in vivo

: Test Type: Chromosome Aberration Test  
Species: Rat (male)  
Strain: Sprague-Dawley  
Cell type: Bone marrow  
Application Route: oral (gavage)  
Exposure time: 6 - 24 - 48 h  
Dose: 30, 2500, and 5000 mg/kg  
Method: Other  
Result: negative  
GLP: no

Test Type: In vivo micronucleus test

Species: Mouse (male)

Cell type: Erythrocytes

Application Route: Intraperitoneal injection

Exposure time: 18 h

Dose: 0, 2500, 5000, 10000, 15000 mg

Method: Other

Result: negative

GLP: No information available.

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

### Citric acid:

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- Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test system: Human lymphocytes  
Concentration: 50 - 3000 µg/ml  
Metabolic activation: without  
Method: OECD Test Guideline 487  
Result: positive  
GLP: No information available.
- Test Type: Ames test  
Test system: Salmonella typhimurium  
Concentration: <= 5000 µg/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: No information available.
- Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Rat (male)  
Strain: Sprague-Dawley  
Cell type: Bone marrow  
Application Route: oral (gavage)  
Exposure time: 1 - 5 d  
Dose: 1-5x 1,2-120-300-3500 mg/kg  
Method: OECD Test Guideline 475  
Result: negative  
GLP: no
- Test Type: dominant lethal test  
Species: Rat (male)  
Strain: Sprague-Dawley  
Cell type: Bone marrow  
Application Route: oral (gavage)  
Exposure time: 1 - 5 d  
Dose: 1-5x 1,2-120-300-3500 mg/kg  
Method: Other  
Result: negative  
GLP: no
- Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.
- Methanol:**
- Genotoxicity in vitro : Test Type: Micronucleus test  
Test system: Chinese hamster lung cells  
Concentration: 40 mg/ml  
Method: Other  
Result: negative  
GLP: No information available.
- Test Type: HGPRT assay  
Test system: Chinese hamster lung cells  
Concentration: 15,8 - 63,3 mg/ml  
Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 476

Result: negative

GLP: No information available.

Test Type: In vitro gene mutation study in bacteria

Test system: Salmonella typhimurium

Concentration: 5 - 5000 µg/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: No information available.

Genotoxicity in vivo : Test Type: Chromosome Aberration Test  
 Species: Mouse (male)  
 Strain: C57BL/6 x DBA/2  
 Application Route: Inhalation  
 Exposure time: 5 d, 6 h/day  
 Dose: 1,04 - 5,3 mg/l  
 Method: Other  
 Result: negative  
 GLP: No information available.

Germ cell mutagenicity - Assessment : It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

**Carcinogenicity**

Not classified

**Product:**

Carcinogenicity - Assessment : No information available.

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Carcinogenicity - Assessment : No information available.

**Propylene Glycol:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**Citric acid:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**Methanol:**

Species : Rat, male and female  
 Application Route : Inhalation  
 Exposure time : 24  
 Dose : 0,013 - 0,13 - 1,3 mg/l

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Control Group : yes  
Frequency of Treatment : 20 h/day  
NOAEL :  $\geq$  1.3 mg/l  
Method : OECD Test Guideline 453  
GLP : No information available.

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified

**Product:**

Reproductive toxicity - Assessment : No information available.

No information available.

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Effects on fertility : Test Type: One generation study  
Species: Rat, male and female  
Strain: Other  
Application Route: oral (gavage)  
Dose: 15 - 150 - 350 mg/kg  
General Toxicity - Parent: NOAEL: 15 mg/kg body weight  
General Toxicity F1: NOAEL: 350 mg/kg body weight  
Method: Other  
GLP: yes

Effects on foetal development : Test Type: Fertility/early embryonic development  
Species: Rat, female  
Strain: Sprague-Dawley  
Application Route: Oral  
Dose: 15 - 150 - 363 mg/kg  
Duration of Single Treatment: 10 d  
Frequency of Treatment: 1 daily  
General Toxicity Maternal: NOAEL: 150 mg/kg body weight  
Teratogenicity: NOAEL:  $>$  363 mg/kg body weight  
Method: Other  
GLP: yes

Reproductive toxicity - : No evidence of adverse effects on sexual function and fertility,

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Assessment or on development, based on animal experiments.  
No teratogenic effects to be expected.

**Propylene Glycol:**

Effects on fertility : Test Type: Two-generation study  
Species: Mouse, male and female  
Strain: CD1  
Application Route: Drinking water  
Dose: 1820 - 4800 - 10100 mg/kg  
General Toxicity - Parent: NOAEL: 10,100 mg/kg body weight  
General Toxicity F1: NOAEL: 10,100 mg/kg body weight  
General Toxicity F2: NOAEL: 10,100 mg/kg body weight  
Method: Other  
GLP: No information available.

Effects on foetal development : Test Type: Pre-natal  
Species: Mouse, female  
Strain: CD1  
Application Route: oral (gavage)  
Dose: 520 - 5200 - 10400 mg/kg  
Duration of Single Treatment: 9 d  
General Toxicity Maternal: NOAEL: 520 mg/kg body weight  
Teratogenicity: NOAEL: 1,040 mg/kg body weight  
Method: OECD Test Guideline 414  
GLP: yes

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.  
No teratogenic effects to be expected.

**Citric acid:**

Effects on foetal development : Test Type: Fertility/early embryonic development  
Species: Rat, female  
Strain: wistar  
Application Route: oral (gavage)  
Dose: 0, 2.95, 13.7, 63.6, 295 mg/k  
Duration of Single Treatment: 10 d  
Frequency of Treatment: 1 daily  
Teratogenicity: NOAEL: > 295 mg/kg body weight  
Method: Other  
GLP: no

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility,  
or on development, based on animal experiments.

**Methanol:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Strain: Sprague-Dawley  
Application Route: Inhalation  
Dose: 0,013 - 0,13 - 1,3 mg/l  
Duration of Single Treatment: 20 h

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General Toxicity - Parent: NOAEC: 1.3 mg/l  
General Toxicity F1: NOAEC: 0.13 mg/l  
General Toxicity F2: NOAEC: 0.13 mg/l  
Method: OECD Test Guideline 416  
GLP: No information available.

Effects on foetal  
development

: Test Type: Pre-natal  
Species: Rat, female  
Strain: Sprague-Dawley  
Application Route: Inhalation  
Dose: 0,27 - 1,33 - 6,65 mg/l  
Duration of Single Treatment: 22.7 h  
General Toxicity Maternal: NOAEC: 1.33 mg/l  
Teratogenicity: NOAEC F1: 1.33 mg/l  
Method: OECD Test Guideline 414  
GLP: No information available.

Test Type: Pre-natal  
Species: Rat  
Strain: Long-Evans  
Application Route: oral (gavage)  
Dose: 1027 - 2054 - 4108 mg/kg  
Frequency of Treatment: 1  
General Toxicity Maternal: LOAEL: 1,027 mg/kg body weight  
Teratogenicity: LOAEL F1: 1,027 mg/kg body weight  
Method: OECD Test Guideline 414  
GLP: No information available.

Reproductive toxicity -  
Assessment

: No reproductive toxicity to be expected.  
No teratogenic effects to be expected.

**STOT - single exposure**

Not classified

**Product:**

Remarks : no data available

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Propylene Glycol:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Citric acid:**

Assessment : May cause respiratory irritation.

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**Methanol:**

Target Organs : Eyes, Central nervous system  
Assessment : Causes damage to organs.

**STOT - repeated exposure**

Not classified

**Product:**

Remarks : no data available

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Propylene Glycol:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Citric acid:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Methanol:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Repeated dose toxicity****Product:**

Remarks : no data available

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Species : Rat, male and female  
NOAEL : 200 mg/kg  
Application Route : oral (gavage)  
Exposure time : 91 d  
Number of exposures : einmal täglich  
Dose : 10 - 50 - 200 - 500 mg/kg tgl.  
Control Group : yes  
Method : OECD Test Guideline 408  
GLP : yes  
Remarks : Information refers to the main component.

Repeated dose toxicity - Assessment : Causes serious eye damage.

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**Propylene Glycol:**

Species : Rat, male and female  
NOAEL : 1.700 - 2.100 mg/kg bw/day  
Application Route : oral (feed)  
Exposure time : 2 a  
Number of exposures : daily  
Dose : 200, 400, 900, 1700 mg/kg bw  
Control Group : yes  
Method : Other  
GLP : no

Species : Cat, male  
NOAEL : 443 mg/kg bw/day  
Application Route : oral (feed)  
Exposure time : 69 - 94 d  
Number of exposures : daily  
Dose : 80 - 4239 mg/kg  
Control Group : yes  
Method : Other  
GLP : no

Species : Rat, male and female  
LOEL : 0.16 mg/l  
Application Route : Inhalation  
Test atmosphere : dust/mist  
Exposure time : 90 d  
Number of exposures : 6 hours/day, 5 days/week  
Dose : 0,16 - 1,01 - 2,18 mg/l  
Control Group : yes  
Method : Other  
GLP : No information available.

Species : Mouse, female  
NOAEL : 0.02  
Application Route : Dermal  
Exposure time : Lifespan  
Number of exposures : 2x / w  
Dose : 10-50-100% / 0.02 ml acetone  
Control Group : yes  
Method : Other  
GLP : no  
Remarks : No pathological findings

**Citric acid:**

Species : Rat  
NOAEL : 4000 mg/kg bw/day  
LOAEL : 8,000 mg/kg  
Application Route : oral (gavage)  
Exposure time : 10 d  
Number of exposures : daily  
Dose : 2, 4, 8, 16 g/kg bw/day  
Control Group : yes  
Method : Other

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GLP : no

Repeated dose toxicity - Assessment : Causes serious eye irritation.

### **Methanol:**

Species : Monkey, male  
LOAEL : 2,340 mg/kg  
Application Route : oral (gavage)  
Exposure time : 3 d  
Number of exposures : daily  
Dose : 2340 mg/kg  
Control Group : no data available  
Method : Other  
GLP : No information available.  
Remarks : Significant toxicity observed in testing

Species : Rat, male and female  
NOEL : 0.13 mg/l  
LOAEL : 1.3 mg/l  
Application Route : Inhalation  
Test atmosphere : vapour  
Exposure time : 12 m  
Number of exposures : 20 h/day  
Dose : 0,013 - 0,13 - 1,3 mg/l  
Control Group : yes  
Method : OECD Test Guideline 453  
GLP : No information available.

Species : Rat, male and female  
NOAEL : 6.66 mg/l  
Application Route : Inhalation  
Test atmosphere : vapour  
Exposure time : 4 w  
Number of exposures : 6 h/d, 5 d/wk  
Dose : 0,663 - 2,65 - 6,63 mg/l  
Control Group : yes  
Method : OECD Test Guideline 412  
GLP : No information available.

Application Route : Skin contact  
Remarks : not tested.

Repeated dose toxicity - Assessment : Toxic if swallowed, in contact with skin or if inhaled.

### **Aspiration toxicity**

Not classified

### **Components:**

**D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

No aspiration toxicity classification

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**Propylene Glycol:**

No aspiration toxicity classification

**Citric acid:**

No aspiration toxicity classification

**Methanol:**

No aspiration toxicity classification

**Experience with human exposure****Product:**

General Information : The possible symptoms known are those derived from the labelling (see section 2).

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 7.5 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: By analogy with a product of similar composition
- NOEC (Pimephales promelas (fathead minnow)): 4.8 mg/l  
Exposure time: 35 d  
Remarks: The values mentioned are those of the active ingredient.  
By analogy with a product of similar composition
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): approx. 7 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: The values mentioned are those of the active ingredient.
- NOEC (Daphnia magna (Water flea)): 1.84 mg/l  
Exposure time: 21 d  
Remarks: The values mentioned are those of the active ingredient.
- Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 30 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: By analogy with a product of similar composition
- NOEC (Selenastrum capricornutum (green algae)): 5.6 mg/l

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Remarks: The values mentioned are those of the active ingredient.

By analogy with a product of similar composition

Toxicity to microorganisms : Remarks: no data available

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 7.5 mg/l

Exposure time: 96 h

Test Type: semi-static test

Analytical monitoring: yes

Method: Directive 67/548/EEC, Annex V, C.1.

GLP: yes

LC100 (Danio rerio (zebra fish)): 10 mg/l

Exposure time: 96 h

Test Type: semi-static test

Analytical monitoring: yes

Method: Directive 67/548/EEC, Annex V, C.1.

GLP: yes

NOEC (Danio rerio (zebra fish)): 5.6 mg/l

Exposure time: 96 h

Test Type: semi-static test

Analytical monitoring: yes

Method: Directive 67/548/EEC, Annex V, C.1.

GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 18 mg/l

Exposure time: 48 h

Test Type: static test

Analytical monitoring: yes

Method: Directive 67/548/EEC, Annex V, C.2.

GLP: yes

Remarks: No toxicity at the limit of solubility

EC100 (Daphnia magna (Water flea)): 32 mg/l

Exposure time: 48 h

Test Type: static test

Analytical monitoring: yes

Method: Directive 67/548/EEC, Annex V, C.2.

GLP: yes

NOEC (Daphnia magna (Water flea)): 10 mg/l

Exposure time: 48 h

Test Type: static test

Analytical monitoring: yes

Method: Directive 67/548/EEC, Annex V, C.2.

GLP: yes

Toxicity to algae/aquatic : ErC50 (Selenastrum capricornutum (green algae)): 30 mg/l

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plants		End point: Growth rate Exposure time: 92 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
		NOEC (Selenastrum capricornutum (green algae)): 5.6 mg/l End point: Growth rate Exposure time: 92 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
Toxicity to fish (Chronic toxicity)	:	LOEC (Pimephales promelas (fathead minnow)): 10 mg/l End point: Other Exposure time: 35 d Analytical monitoring: yes Method: Other GLP: yes
		NOEC (Pimephales promelas (fathead minnow)): 4.8 mg/l End point: Other Exposure time: 35 d Analytical monitoring: yes Method: Other GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC50 (Daphnia magna (Water flea)): approx. 6.8 mg/l End point: mortality Exposure time: 21 d Analytical monitoring: yes Method: Other GLP: yes
		LOEC (Daphnia magna (Water flea)): 8.9 mg/l End point: mortality Exposure time: 21 d Analytical monitoring: yes Method: Other GLP: yes
		NOEC (Daphnia magna (Water flea)): 4.3 mg/l End point: mortality Exposure time: 21 d Analytical monitoring: yes Method: Other GLP: yes
Toxicity to microorganisms	:	EC50 (activated sludge of a predominantly domestic sewage): approx. 115 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no data available

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Method: OECD Test Guideline 209

GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 (activated sludge, domestic): &gt; 71 mg/l

End point: Bacteria toxicity (respiration inhibition)

Exposure time: 3 h

Test Type: aquatic

Analytical monitoring: yes

Method: OECD Test Guideline 209

GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC (activated sludge, domestic): 8.9 mg/l

End point: Bacteria toxicity (respiration inhibition)

Exposure time: 3 h

Test Type: aquatic

Analytical monitoring: yes

Method: OECD Test Guideline 209

GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 (*Pseudomonas putida*): > 140 mg/l

Exposure time: 17 h

Test Type: Other

Analytical monitoring: no data available

Method: DIN 38412 T.8

GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms

: Test Type: artificial soil  
NOEC (*Eisenia fetida* (earthworms)):  $\geq$  1,000 mg/kg  
Exposure time: 14 d  
End point: mortality  
Method: OECD Test Guideline 207  
GLP: yes  
Remarks: Information refers to the main component.

Test Type: artificial soil  
NOEC (*Eisenia fetida* (earthworms)):  $\geq$  1,000 mg/kg  
Exposure time: 14 d  
End point: Body weight  
Method: OECD Test Guideline 207  
GLP: yes  
Remarks: Information refers to the main component.

Test Type: artificial soil  
LC50 (*Eisenia fetida* (earthworms)): > 1,000 mg/kg  
Exposure time: 14 d  
End point: mortality

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Method: OECD Test Guideline 207

GLP: yes

Remarks: Information refers to the main component.

## Plant toxicity

: EC50: > 1,000 mg/kg  
Exposure time: 16 d  
End point: Growth  
Test period: 18 d  
Species: Avena sativa (oats)  
Analytical monitoring: no data available  
Method: OECD Guide-line 208  
GLP: yes

NOEC: 320 mg/kg  
Exposure time: 16 d  
End point: Growth  
Test period: 18 d  
Species: Avena sativa (oats)  
Analytical monitoring: no data available  
Method: OECD Test Guideline 208  
GLP: yes

EC50: > 590 mg/kg  
Exposure time: 15 d  
End point: Growth  
Test period: 18 d  
Species: Lactuca sativa (lettuce)  
Analytical monitoring: no data available  
Method: OECD Test Guideline 208

NOEC: 320 mg/kg  
Exposure time: 15 d  
End point: Growth  
Test period: 18 d  
Species: Lactuca sativa (lettuce)  
Analytical monitoring: no data available  
Method: OECD Test Guideline 208

**Propylene Glycol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: yes  
Method: Other  
GLP: no

Toxicity to daphnia and other : LC50 (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l  
aquatic invertebrates : End point: mortality  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: yes  
Method: Other

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GLP: yes

- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 19,000 mg/l  
End point: Growth rate  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes
- ErC50 (Skeletonema costatum (marine diatom)): 19,100 mg/l  
End point: Growth rate  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 201  
GLP: yes
- Toxicity to fish (Chronic toxicity) : Chronic Toxicity Value (Fish): 2,500 mg/l  
End point: Other  
Exposure time: 30 d  
Method: Other  
GLP: no  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia spec.): 13,020 mg/l  
End point: Reproduction rate  
Exposure time: 7 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: Other  
GLP: No information available.
- Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l  
End point: Growth rate  
Exposure time: 18 h  
Test Type: Growth inhibition  
Analytical monitoring: no  
Method: Other  
GLP: no
- Sediment toxicity : LC50: 6983 mg/kg dry weight (d.w.)  
Analytical monitoring: yes  
Solvent: no  
Duration: 10 d  
Test Type: static test  
Sediment: Natural sediment  
Basis for effect: mortality  
Method: Other  
GLP: yes

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### Citric acid:

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 440 - 760 mg/l  
End point: mortality  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: no  
Method: OECD Test Guideline 203  
GLP: no  
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 1,535 mg/l  
End point: mortality  
Exposure time: 24 h  
Test Type: static test  
Analytical monitoring: no  
Method: Other  
GLP: no  
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to algae/aquatic plants : NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l  
End point: Biomass  
Exposure time: 8 d  
Test Type: static test  
Analytical monitoring: no  
Method: Other  
GLP: no  
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to fish (Chronic toxicity) : Remarks: not required
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: not required
- Toxicity to microorganisms : (Pseudomonas putida): > 10,000 mg/l  
End point: Growth rate  
Exposure time: 16 h  
Test Type: aquatic  
Analytical monitoring: no data available  
Method: Other  
GLP: No information available.  
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to terrestrial organisms : NOEC (other avian): > 4,000 mg/kg  
Exposure time: 14 d  
End point: mortality  
Method: Other

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**Methanol:**

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l  
End point: mortality  
Exposure time: 96 h  
Test Type: flow-through test  
Analytical monitoring: yes  
Method: EPA  
GLP: No information available.
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 18,260 mg/l  
End point: Immobilization  
Exposure time: 96 h  
Test Type: semi-static test  
Analytical monitoring: no data available  
Method: OECD Test Guideline 202  
GLP: No information available.  
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (microalgae)): ca. 22,000 mg/l  
End point: Growth rate  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no data available  
Method: OECD Test Guideline 201  
GLP: No information available.
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 446.7 mg/l  
Exposure time: 28 d  
Method: Other  
GLP: no  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 208 mg/l  
End point: Reproduction rate  
Exposure time: 21 d  
Method: calculated  
GLP: no  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
- Toxicity to microorganisms : IC50 (activated sludge): > 1,000 mg/l  
End point: Bacteria toxicity (growth inhibition)  
Exposure time: 3 h  
Test Type: aquatic  
Analytical monitoring: yes  
Method: OECD Test Guideline 209  
GLP: No information available.

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- Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1 mg/cm<sup>2</sup>  
Exposure time: 48 h  
End point: mortality  
Method: OECD Test Guideline 207  
GLP: No information available.
- NOEC (Folsomia candida): 10000 mg/kg dry weight (d.w.)  
Exposure time: 28 d  
End point: mortality  
Method: Other  
GLP: No information available.
- Plant toxicity : IC50: ca. 41,000 mg/l  
Exposure time: 3 d  
End point: emergence  
Species: Lactuca sativa (lettuce)  
Analytical monitoring: no data available  
Method: Other  
GLP: no
- Sediment toxicity : Remarks: Not applicable

**Persistence and degradability****Product:**

- Biodegradability : Biodegradation: > 80 %  
Method: OECD Test Guideline 301B  
Remarks: By analogy with a product of similar composition

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

- Biodegradability : aerobic  
Inoculum: activated sludge  
Concentration: 10 mg/l  
CO<sub>2</sub> formation in % of theoretical value  
Result: Readily biodegradable.  
Biodegradation: 86 %  
Exposure time: 34 d  
Method: OECD Test Guideline 301B  
GLP: yes
- aerobic  
Inoculum: activated sludge  
Concentration: 20 mg/l  
CO<sub>2</sub> formation in % of theoretical value  
Result: Readily biodegradable.  
Biodegradation: 89 %  
Exposure time: 34 d  
Method: OECD Test Guideline 301B  
GLP: yes
- aerobic

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Inoculum: activated sludge  
Concentration: 10 mg/l  
Dissolved organic carbon (DOC)  
Result: Readily biodegradable.  
Biodegradation: 98 %  
Exposure time: 34 d  
Method: OECD Test Guideline 301B  
GLP: yes

aerobic  
Inoculum: activated sludge  
Concentration: 20 mg/l  
Dissolved organic carbon (DOC)  
Result: Readily biodegradable.  
Biodegradation: 99 %  
Exposure time: 34 d  
Method: OECD Test Guideline 301B  
GLP: yes

Physico-chemical  
removability : Remarks: Readily biodegradable, according to appropriate  
OECD test.

Stability in water : Test Type: abiotic  
Hydrolysis: at 50 °C(10 %)  
Method: OECD Test Guideline 111  
GLP: yes

Test Type: abiotic  
Hydrolysis: at 50 °C(8 %)  
Method: OECD Test Guideline 111  
GLP: yes

Test Type: abiotic  
Hydrolysis: at 50 °C(8 %)  
Method: OECD Test Guideline 111  
GLP: yes

**Propylene Glycol:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Concentration: 100 mg/l ThOD  
Biochemical Oxygen Demand (BOD)  
Result: Readily biodegradable.  
Biodegradation: 100 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F  
GLP: yes

aerobic  
Inoculum: activated sludge  
Concentration: 50.3 mg/l  
Carbon dioxide (CO<sub>2</sub>)  
Result: Readily biodegradable.

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Biodegradation: 90.6 %  
Exposure time: 64 d  
Method: OECD Test Guideline 306  
GLP: yes

**Citric acid:**

Biodegradability

: aerobic  
Inoculum: domestic sewage  
Concentration: 10 mg/l  
Carbon dioxide (CO<sub>2</sub>)  
Result: Readily biodegradable.  
Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: No information available.

aerobic  
Inoculum: domestic sewage  
Concentration: 3 - 20 mg/l  
DOC decrease  
Result: Readily biodegradable.  
Biodegradation: 100 %  
Exposure time: 19 d  
Method: OECD Test Guideline 301E  
GLP: No information available.

aerobic  
Inoculum: domestic sewage  
Concentration: 400 mg/l  
DOC decrease  
Result: Readily biodegradable.  
Biodegradation: 85 %  
Exposure time: 14 d  
Method: OECD Test Guideline 302B  
GLP: No information available.

Physico-chemical  
removability

: Remarks: Readily biodegradable, according to appropriate  
OECD test.

**Methanol:**

Biodegradability

: aerobic  
Inoculum: activated sludge  
Concentration: 3 - 10 mg/l  
Biochemical Oxygen Demand (BOD)  
Result: Readily biodegradable.  
Biodegradation: 95 %  
Exposure time: 20 d  
Method: Closed Bottle test  
GLP: no

aerobic  
Inoculum: activated sludge

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Concentration: 4 - 200 g/l  
 Biochemical Oxygen Demand (BOD)  
 Result: Readily biodegradable.  
 Biodegradation: 82.7 %  
 Exposure time: 5 d  
 Method: Other  
 GLP: no

Photodegradation : Rate constant: 9.32E-13 cm<sup>3</sup>/s  
 Degradation (indirect photolysis): 50 % Degradation half life:  
 17.2 d  
 GLP: no

**Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: no data available

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : Pow: 180 (approx. 68 °F / 20 °C)  
 log Pow: 2.3 (approx. 68 °F / 20 °C)  
 pH: 6.7 - 7.3  
 Method: calculated  
 GLP: yes

**Propylene Glycol:**

Bioaccumulation : Bioconcentration factor (BCF): 0.09  
 Method: calculated  
 GLP: no  
 Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Partition coefficient: n-octanol/water : log Pow: -1.07 (68.9 °F / 20.5 °C)  
 pH: 6.3  
 Method: Regulation (EC) No. 440/2008, Annex, A.8  
 GLP: yes

**Citric acid:**

Bioaccumulation : Bioconcentration factor (BCF): 3.2  
 Method: calculated  
 GLP: no

Partition coefficient: n-octanol/water : log Pow: -1.55  
 Method: Other

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**Methanol:**

Bioaccumulation : Species: Leuciscus idus (Golden orfe)  
Bioconcentration factor (BCF): < 10  
Exposure time: 72 h  
Method: Other  
GLP: No information available.

Partition coefficient: n-octanol/water : log Pow: -0.77  
Method: No information available.  
GLP: No information available.

**Mobility in soil****Product:**

Distribution among environmental compartments : Remarks: no data available

**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Distribution among environmental compartments : Medium: water - soil  
Method: OECD Test Guideline 106  
Remarks: Not applicable

**Propylene Glycol:**

Distribution among environmental compartments : Adsorption/Soil  
Medium: water - soil  
log Koc: 0.46  
Method: other (calculated)

Stability in soil : Test Type: Laboratory  
Soil temperature: 77 °F / 25 °C  
Radio label: no  
Percentage dissipation: 96 - 98 %  
Method: Other  
GLP: no

**Methanol:**

Distribution among environmental compartments : Adsorption/Soil  
Medium: water - soil  
Koc: 1  
Method: other (calculated)

**Other adverse effects****Product:**

Additional ecological information : There is no data available for this product.

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**Components:****D-Glucitol, 1-deoxy-(methylamino)-, N-C12-14 acyl deriv.:**

Environmental fate and pathways : no data available

Results of PBT and vPvB assessment : The substance is not identified as a PBT or as a vPvB substance.

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

**Propylene Glycol:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

**Citric acid:**

Environmental fate and pathways : no data available

Results of PBT and vPvB assessment : The substance is not identified as a PBT or as a vPvB substance.

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

**Methanol:**

Environmental fate and pathways : not available

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**RCRA - Resource Conservation and Recovery Act Waste Code : This product, if discarded as sold, is not a Federal RCRA hazardous waste.  
: NONE

Waste from residues : Consult local, state, and federal regulations.

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Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

**SECTION 14. TRANSPORT INFORMATION**

DOT not restricted  
IATA not restricted  
IMDG not restricted

**SECTION 15. REGULATORY INFORMATION****CERCLA Reportable Quantity**

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Serious eye damage or eye irritation

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I

Intermediate or Final VOC's (40 CFR 60.489):

Propylene Glycol	57-55-6	>= 1 - < 5 %
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**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**The components of this product are reported in the following inventories:**

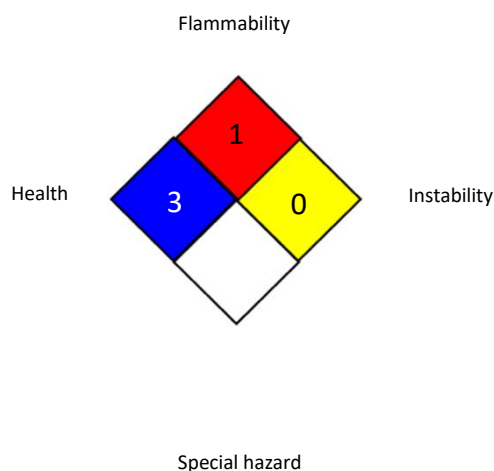
TSCA : All components of this product are listed on the TSCA Inventory. However, the primary use of this product is NOT subject to TSCA but rather to FDA and must comply with the FDA regulations.

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**SECTION 16. OTHER INFORMATION****Further information****NFPA 704:****Full text of other abbreviations**

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)  
US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; 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

# SAFETY DATA SHEET

# CLARIANT<sup>E</sup>

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- Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

For additional information, contact Product Stewardship.

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