Substance key: 000000565358	Revision Date: 10/19/2023
Version : 5 - 0 / USA	Date of printing :01/15/2024

SECTION 1. IDENTIFICATION

Identification of the company:
Clariant Corporation
500 East Morehead Street
Charlotte, NC, 28202
Telephone No.: +1 704 331 7000

Information of the substance/preparation:
Product Stewardship, +1-704-331-7710
e-mail: SDS.NORAM@clariant.com

Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: **GlucoTain Care**
Material number: 282128

Primary product use: Raw material for detergents

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.

Other hazards

No additional hazards are known except those derived from the labelling.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.	1591783-13-9	>= 30 - < 50
Propylene Glycol	57-55-6	>= 1 - < 5
Glycerine	56-81-5	>= 1 - < 5
Citric acid	77-92-9	>= 1 - < 5

Actual concentration is 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 : If swallowed give patient 2 glasses of water.
Get immediate 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).
No additional symptoms are known.
Causes serious eye damage.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray jet
Alcohol-resistant foam

Unsuitable extinguishing : Dry powder

media		Carbon dioxide (CO2) High volume water jet
Specific hazards during firefighting	:	In case of fire hazardous decomposition products may be produced such as: Nitrogen oxides (NOx) Carbon monoxide
Further information	:	Wear full protective clothing and self-contained breathing apparatus.
Special protective equipment for firefighters	:	Self-contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Wear suitable protective equipment. Wearing appropriate personal protective equipment, contain spill, ventilate area of spill or leak, remove all sparking devices or ignition sources, collect onto inert absorbent, and place in a suitable container.
Environmental precautions	:	Do not allow to enter drains or waterways
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.
Further information on storage conditions	:	Keep container closed.

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
Glycerine	56-81-5	TWA (mist,	5 mg/m3	OSHA Z-1

		respirable fraction)		
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0

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 : Butyl Rubber, PVC Or Neoprene.

Eye protection : Chemical splash goggles with face shield.

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

Protective measures : Avoid contact with skin and eyes.

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 : paste

Colour : white to light yellow

Odour	:	characteristic
Odour Threshold	:	not determined
pH	:	5 - 7 (95 °F / 35 °C) Concentration: 1 %
Melting point	:	approx. 90 °F / 32 °C
Boiling point	:	approx. 212 °F / 100 °C Based on water-content.
Flash point	:	Not applicable
Evaporation rate	:	not determined
Flammability (solid, gas)	:	The product is not flammable. Method: Flammability (solids) Remarks: Information based on the active ingredient.
Self-ignition	:	> 275 °F / > 135 °C
Upper explosion limit / upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapour pressure	:	2.3 hPa (77 °F / 25 °C) Corresp. to vapour pressure of water
Relative vapour density	:	Not applicable
Relative density	:	Not applicable
Density	:	approx. 1.046 g/cm3 (122 °F / 50 °C) Method: DIN 51757
Solubility(ies)		
Water solubility	:	soluble (104 °F / 40 °C)
Solubility in other solvents	:	39 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 determined
Decomposition temperature	:	> 392 °F / > 200 °C

Heating rate: 3 K/min
Method: DSC

Viscosity
Viscosity, dynamic : not determined

Viscosity, kinematic : not determined

Explosive properties : Not explosive

Oxidizing properties : There are no chemical groups associated with oxidising properties present in the molecule.

Self-heating substances : not determined

Dust explosion class : not capable of dust explosion

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 : Keep away from heat, sparks, open flames, and other sources of ignition.
Avoid dust formation.

Incompatible materials : not known

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Ingestion
Inhalation
Skin contact

Acute toxicity

Not classified due to lack of data.

Product:

Acute oral toxicity : LD50 (Rat): 2,500 mg/kg
Method: OECD Test Guideline 423
Remarks: Information refers to the main component.

Acute inhalation toxicity : Remarks: not tested.

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-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Acute oral toxicity : LD50 (Rat, female): ca. 2,500 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
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
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

Glycerine:

Acute oral toxicity : LD50 (Rat, female): 27,200 mg/kg
Method: Other
GLP: no

Acute inhalation toxicity : LC50 (Rat, male): 4,655 mg/l
Exposure time: 7 h
Test atmosphere: vapour

Method: Other
GLP: no

Acute dermal toxicity : LD50 (Guinea pig, male and female): 56,750 mg/kg
Method: Other
GLP: no

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

Skin corrosion/irritation

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

Product:

Species : EPISKIN Human Skin Model Test
Method : OECD Test Guideline 439
Result : No skin irritation
Remarks : The values mentioned are those of the active ingredient.

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes
Remarks : The values mentioned are those of the active ingredient.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439
Result : No skin irritation

Propylene Glycol:

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

Glycerine:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	Other
Result	:	No skin irritation
GLP	:	no

Citric acid:

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

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	:	The values mentioned are those of the active ingredient.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Species	:	Rabbit
Result	:	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
GLP	:	No information available.

Glycerine:

Species	:	rabbit eye
Result	:	non-irritant
Exposure time	:	<= 7 d
Method	:	Other
GLP	:	no

Citric acid:

Species	:	rabbit eye
Assessment	:	Irritating to eyes.

Method : OECD Test Guideline 405
GLP : yes

Respiratory or skin sensitisation

Skin sensitisation

Not classified due to lack of data.

Respiratory sensitisation

Not classified due to lack of data.

Product:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : non-sensitizing
Remarks : Information based on the active ingredient.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

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

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.

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

Glycerine:

Remarks : not required

Citric acid:

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

Assessment : Causes serious eye irritation.

Germ cell mutagenicity

Not classified due to lack of data.

Product:

Genotoxicity in vitro	:	Test Type: HGPRT assay Test system: V79 cells (embryonic lung fibroblasts) of the Chinese hamster Method: OECD Test Guideline 476 Result: negative Remarks: Information refers to the main component.
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Method: OECD Test Guideline 474 Result: negative Remarks: Information refers to the main component.
Germ cell mutagenicity - Assessment	:	Not mutagenic in Ames Test

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Mammalian cell gene mutation assay Test system: Chinese hamster fibroblasts Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Strain: NMRI Application Route: oral (gavage) Method: OECD Test Guideline 474 Result: negative
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

Glycerine:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 100 - 10000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No information available.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Concentration: 100 - 1000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: No information available.

Test Type: Unscheduled DNA synthesis
Test system: rat hepatocytes

Concentration: 100 - 1000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 482
Result: negative
GLP: No information available.

Test Type: In vitro gene mutation study in mammalian cells
Test system: Chinese hamster ovary cells
Concentration: 100 - 1000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
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.

Citric acid:

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.

Carcinogenicity

Not classified due to lack of data.

Product:

Carcinogenicity - Assessment : No information available.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Carcinogenicity - Assessment : No information available.

Propylene Glycol:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Glycerine:

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

Citric acid:

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 due to lack of data.

Product:

Reproductive toxicity - Assessment : No information available.

No information available.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Application Route: oral (gavage)
Dose: 0, 15, 150, 363 mg/kg bw/d
General Toxicity Maternal: NOAEL: 150 mg/kg body weight
Developmental Toxicity: NOAEL: >= 363 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: By analogy with a product of similar composition

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.

Glycerine:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Drinking water
Dose: 2000 mg/kg
General Toxicity - Parent: NOAEL: > 2,000 mg/kg body weight
General Toxicity F1: NOAEL: > 2,000 mg/kg body weight
General Toxicity F2: NOAEL: > 2,000 mg/kg body weight
Method: Other
GLP: no

Effects on foetal development : Species: Rat
Strain: wistar

Application Route: oral (gavage)
Dose: 1,31-60,8-282-1310mg/kg
General Toxicity Maternal: NOAEL: 1,310 mg/kg body weight
Teratogenicity: NOAEL: 1,310 mg/kg body weight
Method: OECD Test Guideline 414
GLP: no

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.

STOT - single exposure

Not classified due to lack of data.

Product:

Remarks : not tested.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated 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.

Glycerine:

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

Citric acid:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified due to lack of data.

Product:

Remarks : not tested.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated 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.

Glycerine:

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.

Repeated dose toxicity

Product:

Species : Rat
NOAEL : 750 mg/kg
Exposure time : 28 d
Method : OECD Test Guideline 407
Remarks : Information refers to the main component.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Species : Rat, male and female
NOAEL : 200 mg/kg bw/day
Application Route : oral (gavage)
Exposure time : 91 d
Number of exposures : daily
Dose : 0, 10, 50, 200, 500 mg/kg bw/d
Method : OECD Test Guideline 408
Remarks : By analogy with a product of similar composition

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

Glycerine:

Species	:	Rat, male and female
NOAEL	:	8,000 - 10,000 mg/kg
Application Route	:	oral (feed)
Exposure time	:	2 a
Number of exposures	:	daily
Dose	:	5 - 10 - 20 % in diet
Control Group	:	yes
Method	:	Other
GLP	:	no

Species	:	Rat, male and female
NOAEL	:	0.167 mg/l

Application Route	:	Inhalation
Exposure time	:	13 w
Number of exposures	:	6 hours/day, 5 days/week
Dose	:	33 - 165 - 660 mg/m3
Control Group	:	yes
Method	:	OECD Test Guideline 413
GLP	:	No information available.

Species	:	Rabbit
NOAEL	:	5,040 mg/kg
Application Route	:	Skin contact
Exposure time	:	45 w
Number of exposures	:	8 hours/day, 5 days/week
Dose	:	0,5 - 4,0 ml/kg
Control Group	:	yes
Method	:	Other
GLP	:	no

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
GLP	:	no

Repeated dose toxicity - Assessment	:	Causes serious eye irritation.

Aspiration toxicity

Not classified due to lack of data.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

no data available

Propylene Glycol:

No aspiration toxicity classification

Glycerine:

No aspiration toxicity classification

Citric acid:

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

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.91 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
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
Remarks: The values mentioned are those of the active ingredient.

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 4.8 mg/l
Exposure time: 35 d
Remarks: The values mentioned are those of the active ingredient.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 3.24 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: The values mentioned are those of the active ingredient.

Toxicity to microorganisms : EC50 (activated sludge): 171 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 7.5 mg/l
End point: mortality
Exposure time: 96 h

Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: By analogy with a product of similar composition

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7.29 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 49 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 4.8 mg/l
End point: mortality
Exposure time: 35 d
Test Type: flow-through test
Method: OECD Test Guideline 210
Remarks: By analogy with a product of similar composition

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 3.24 mg/l
End point: Reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

Toxicity to microorganisms : NOEC: 1000
Exposure time: 28 d
Test Type: Soil
Method: OECD 216

Toxicity to soil dwelling organisms : Test Type: artificial soil
NOEC (Eisenia fetida (earthworms)): 1000 mg/kg dry weight (d.w.)
Exposure time: 56 d
End point: Reproduction
Remarks: By analogy with a product of similar composition

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 aquatic invertebrates : LC50 (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l
End point: mortality
Exposure time: 96 h

Test Type: static test
Analytical monitoring: yes
Method: Other
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

Glycerine:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: no data available Method: Other GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h Test Type: static test Analytical monitoring: no data available Method: OECD Test Guideline 202 GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae/aquatic plants	:	NOEC (Scenedesmus quadricauda (Green algae)): >= 10,000 mg/l End point: Biomass Exposure time: 8 d Test Type: static test Analytical monitoring: no data available 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	:	NOEC (Pseudomonas putida): > 10,000 mg/l End point: Bacteria toxicity (growth inhibition) Exposure time: 16 h Test Type: aquatic Analytical monitoring: no data available Method: Other GLP: No information available.
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable

Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

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

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-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

Biodegradability : Inoculum: activated sludge
Carbon dioxide (CO2)
Result: Readily biodegradable.
Biodegradation: 84.9 %
Exposure time: 29 d
Method: OECD Test Guideline 301B
Remarks: By analogy with a product of similar composition

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 (CO2)
Result: Readily biodegradable.
Biodegradation: 90.6 %
Exposure time: 64 d
Method: OECD Test Guideline 306
GLP: yes

Glycerine:

Biodegradability : aerobic
Inoculum: activated sludge, industrial
Concentration: 226 mg/l
TOC
Result: Readily biodegradable.
Biodegradation: 94 %

Exposure time: 24 h
Method: Other
GLP: no

Citric acid:

Biodegradability : aerobic
Inoculum: domestic sewage
Concentration: 10 mg/l
Carbon dioxide (CO2)
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.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

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

Partition coefficient: n-octanol/water : log Pow: 2.9 (68 °F / 20 °C)
pH: 6.13

Method: OECD Test Guideline 117

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

Glycerine:

Bioaccumulation : Remarks: Due to the low logPow bioaccumulation is not expected

Citric acid:

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

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

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not tested.

Components:

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

Glycerine:

Distribution among : Remarks: Not applicable

environmental compartments

Other adverse effects

Product:

Environmental fate and pathways : Remarks: no data available

Additional ecological information : no data available

Components:

D-Glucitol, 1-deoxy-1-(methylamino)-, N-(C8-16 (even numbered) and C18 unsaturated acyl) deriv.:

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

Propylene Glycol:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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

Glycerine:

Environmental fate and pathways : not available

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating 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.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	This product, if discarded as sold, is not a Federal RCRA hazardous waste.
Waste Code	:	NONE
Waste from residues	:	Consult local, state, and federal regulations.
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

This material does not contain any components with a CERCLA 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 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Propylene Glycol	57-55-6	>= 1 - < 5 %
Glycerine	56-81-5	>= 1 - < 5 %

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

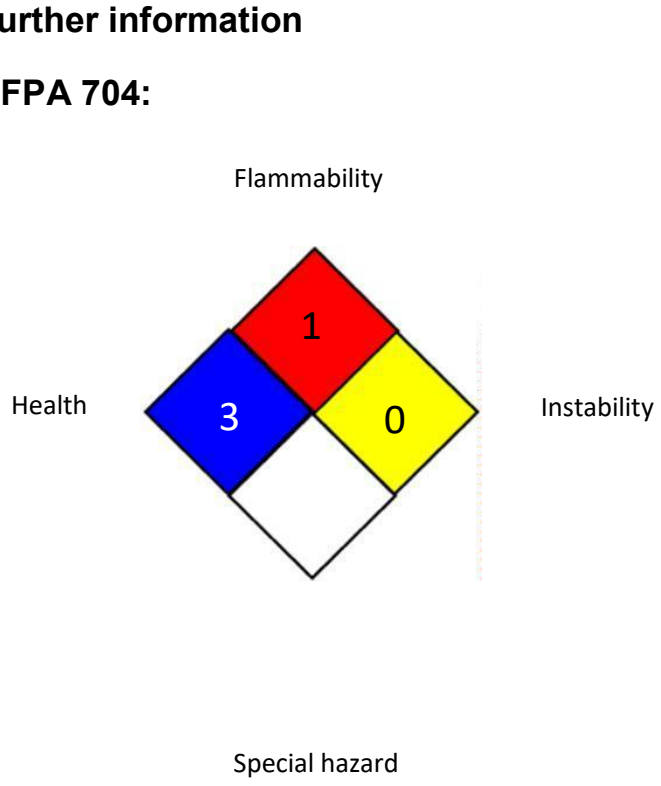
The components of this product are reported in the following inventories:

TSCA : This product is not listed on the TSCA Inventory. It is to be used as a cosmetic ingredient only. Any other use will subject the user to penalties under the Toxic Substances Control Act and the regulations issued thereunder.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Full text of other abbreviations

OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
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 - 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

Observe national and local legal requirements
This product is not listed on the TSCA Inventory. It is to be used as a cosmetic ingredient only.
Any other use will subject the user to penalties under the Toxic Substances Control Act and the regulations issued thereunder.
For additional information, contact Product Stewardship.

Revision Date : 10/19/2023

US / EN