SECTION 1. IDENTIFICATION

Identification of the company:
Clariant Corporation
4000 Monroe Road
Charlotte, NC, 28205
Telephone No.: +1 704 331 7000

Information of the substance/preparation:
Product Safety 1-704-331-7710
Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: PHENONIP
Material number: 171090
Synonyms: Product Has No Synonyms
Chemical family: mixture of biocidal substances

Primary product use: Personal Care Preservatives

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Oral) : Category 4

GHS label elements
Hazard pictograms : !

Signal word : Warning
Hazard statements : H302 Harmful if swallowed.
Precautionary statements : Prevention:
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Disposal:
P501 Dispose of contents/container to an approved waste disposal plant.
Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Substance name : mixture of biocidal substances
Chemical nature :

Hazardous components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Phenoxyethanol</td>
<td>122-99-6</td>
<td>72</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

General advice : If symptoms persist, call a physician.
If inhaled : Remove to fresh air.
             Call a physician if irritation develops or persists.
             Call a physician if symptoms occur.
In case of skin contact : Wash area with mild soap and copious amounts of water.
                          If skin irritation occurs: Get medical advice/attention.
In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
                        Get medical attention immediately if irritation develops and persists.
If swallowed : If conscious, give the patient 1-2 glasses of water (8-16 oz.) and call a doctor. Never give anything by mouth to an unconscious person. Induce vomiting only at the instructions of a doctor or nurse.
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.
Notes to physician : None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray jet
                                   Alcohol-resistant foam
                                   Carbon dioxide (CO2)
                                   Dry powder
Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting:
- In case of fires, hazardous combustion gases are formed:
  - Carbon monoxide (CO)
  - Carbon dioxide (CO2)
- Emits toxic and corrosive fumes under fire conditions.

Further information:
- Wear full protective clothing and NIOSH/MSHA-approved positive pressure, self-contained breathing apparatus.

Special protective equipment for firefighters:
- Self-contained breathing apparatus
- Full protective suit

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Wear suitable protective clothing.
- Ensure adequate ventilation.
- Avoid contact with skin and eyes.
- Wear proper protective equipment. Contain spill. Spills should be collected as a liquid or absorbed on suitable absorbant and placed in proper containers for disposal. Do not discharge into storm drains or the aquatic environment.

Environmental precautions:
- The product should not be allowed to enter drains, water courses or the soil.
- If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion:
- Keep away sources of ignition. Keep away from heat.

Advice on safe handling:
- Store in a closed container.
- Avoid contact with skin and eyes.
- Do not breathe vapours.
- Store above 32 F and below 104 F.

Conditions for safe storage:
- Keep container tightly closed in a cool, well-ventilated place.
- Protect from moisture.
- Keep only in the original container.

Technical measures/Precautions:
- Store in original container.
- Keep container closed.
Materials to avoid: Keep away from oxidizing agents.

Storage period: 36 Months

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
No level has been established by OSHA, NIOSH, ACGIH.

Engineering measures: Local ventilation recommended - mechanical ventilation may be used.

Personal protective equipment
Respiratory protection: If airborne concentrations pose a health hazard, become irritating or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134

Hand protection
Remarks: Chemical resistant gloves

Eye protection: Tightly fitting safety goggles

Skin and body protection: Wear suitable protective equipment.

Protective measures: Avoid contact with skin and eyes.
Do not inhale vapours

Hygiene measures: Use only in well-ventilated areas.
Remove/Take off immediately all contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid

Colour: yellow

Odour: weak

Odour Threshold: Not tested.

pH: Not tested.

Decomposition temperature: > 100 °C

Boiling point: Not determined

Flash point: 120 °C
Data relate to solvent

Evaporation rate: Not tested.
Flammability (solid, gas) : Not applicable
Upper explosion limit : Not applicable
Lower explosion limit : Not applicable
Combustion number : Not applicable
Vapour pressure : not tested.
Relative vapour density : not tested.
Density : approx. 1.12 g/cm³ (20 °C)
Bulk density : Not applicable
Solubility(ies) : not tested.
   Water solubility : slightly soluble (20 °C)
   Solubility in other solvents : not tested.
      Solvent: fat
Partition coefficient: n-octanol/water : Not applicable
Auto-ignition temperature : not available
Decomposition temperature : 277 °C
   Heating rate : 3 K/min
   No decomposition if used as directed.
Viscosity
   Viscosity, dynamic : not tested.
   Viscosity, kinematic : not tested.
Explosive properties : Not explosive
Oxidizing properties : not oxidizing
Minimum ignition energy : Not applicable
Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY
Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Stable
Possibility of hazardous reactions : Reactions with oxidising agents.
**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

**Ingestion**

**Acute toxicity**

**Product:**

**Acute oral toxicity:** LD50 (Rat): 1,736 mg/kg  
Method: internal test

**Acute inhalation toxicity:** Remarks: not tested.

**Acute dermal toxicity:** LD50 (Rat): > 5,000 mg/kg

**Components:**

**2-Phenoxyethanol:**

**Acute oral toxicity:** LD50 (Rat, male and female): 1,850 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

**Acute inhalation toxicity:** LC50 (Rat, male and female): > 1 mg/l  
Exposure time: 14 d  
Method: OECD Test Guideline 412  
GLP: yes

**Acute dermal toxicity:** LD50 (Rabbit, male and female): > 2,214 mg/kg  
Method: Other  
GLP: no

**Skin corrosion/irritation**

**Product:**

Method: OECD Test Guideline 404  
Result: No skin irritation
Components:

2-Phenoxyethanol:
Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: no

Serious eye damage/eye irritation

Product:
Result: No eye irritation
Method: OECD Test Guideline 405

Components:

2-Phenoxyethanol:
Species: rabbit eye
Result: Eye irritation
Exposure time: 15 d
Method: OECD Test Guideline 405
GLP: no

Respiratory or skin sensitisation

Product:
Remarks: not tested.

Components:

2-Phenoxyethanol:
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

Germ cell mutagenicity

Product:
Germ cell mutagenicity - Assessment: No information available.

Components:

2-Phenoxyethanol:
Genotoxicity in vitro: Test Type: Ames test
Species: Salmonella typhimurium
Concentration: 20 - 5000 µg/plate
Metabolic activation: with and without
Method: OECD Test Guideline 471
Result: negative
GLP: yes

: Test Type: Chromosome aberration test in vitro
Species: Chinese hamster lung cells
Concentration: 43.8 - 1400 µg/ml
Metabolic activation: with and without
Method: OECD Test Guideline 473
Result: negative
GLP: yes

: Test Type: HGPRT assay
Species: Chinese hamster lung cells
Concentration: 43.8 - 1400 µg/ml
Metabolic activation: with and without
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Strain: NMRI
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Exposure time: 24 - 48 h
Dose: 1x 125-250-500 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

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

Carcinogenicity

Product: 
Carcinogenicity - Assessment : No information available.

Components:
2-Phenoxyethanol:
Carcinogenicity - Assessment : No information available.

IARC Not listed
OSHA Not listed
NTP Not listed
Reproductive toxicity

Product:
Reproductive toxicity - Assessment : No information available.

No information available.

Components:
2-Phenoxyethanol:
Effects on fertility :
Test Type: Two-generation study
Species: Mouse
Sex: male and female
Dose: 0.25 - 1.25 - 2.5 % in diet
Exposure time: 105 d
Frequency of Treatment: daily
CD1
Application Route: oral (feed)
Group: yes
NOAEL: 1.875 mg/kg,
F1: 375 mg/kg,
F2: 375 mg/kg,
Method: Other
GLP: yes

Reproductive toxicity - Assessment : No information available.

No information available.

STOT - single exposure

Product:
Remarks: not tested.

Components:
2-Phenoxyethanol:
Remarks: no data available

STOT - repeated exposure

Product:
Remarks: not tested.

Components:
2-Phenoxyethanol:
Remarks: no data available
Repeated dose toxicity

**Product:**
Remarks: not tested.

**Components:**

**2-Phenoxyethanol:**
Species: Rat, male and female
NOAEL: 369 mg/kg
Application Route: oral (gavage)
Exposure time: 13 w
Number of exposures: daily
Dose: 1250-2500-5000-10000-20000mg/l
Group: yes
Method: OECD Test Guideline 408
GLP: yes

Species: Rat, male and female
NOAEL: 0.0482 mg/l
LOAEL: 0.246 mg/l
Application Route: Inhalation
Exposure time: 14 d
Number of exposures: 6 h/d, 5 days/w
Dose: 40 - 200 - 1000 mg/m3
Group: yes
Method: OECD Test Guideline 412
GLP: yes

Species: Rabbit, male and female
NOAEL: 500 mg/kg
Application Route: Skin contact
Exposure time: 13 w
Number of exposures: 6 h/d, 5 days/w
Dose: 50 - 150 - 500 mg/kg
Group: yes
Method: OECD Test Guideline 411
GLP: yes

**Aspiration toxicity**

**Product:**
no data available

**Components:**

**2-Phenoxyethanol:**
no data available
Experience with human exposure

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

Further information

Product: Remarks: Inhalation of vapours leads to irritation of respiratory tract and mucous membranes, headache, nausea, dizziness, vomiting

Components:

2-Phenoxyethanol:
Test Type: see user defined free text
see user defined free text

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:
Toxicity to fish: LC50 (Fish): > 100 mg/l
Method: calculated

Toxicity to daphnia and other aquatic invertebrates: Remarks: not tested.

Toxicity to algae: Remarks: not tested.

Toxicity to bacteria: Remarks: not tested.

Components:

2-Phenoxyethanol:
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 344 mg/l
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: Other
GLP: no data available

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 500 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: no
Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae: EC50 (Desmodesmus subspicatus (green algae)): 625 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 (Desmodesmus subspicatus (green algae)): 443 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 24 mg/l
Exposure time: 34 d
Test Type: flow through
Analytical monitoring: yes
Method: OECD Test Guideline 210
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 9.43 mg/l
Exposure time: 21 d
End point: Reproduction rate
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

Toxicity to bacteria: EC50 (activated sludge): > 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 0.5 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms: Test Type: artificial soil
LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d
End point: mortality
Method: OECD Test Guideline 207
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
Plant toxicity:

EC50 (Vicia sativa): 107 mg/kg
Exposure time: 19 d
Analytical monitoring: no
Method: OECD Guide-line 208
GLP: yes

EC50 (Brassica napus): 37 mg/kg
Exposure time: 19 d
Analytical monitoring: no
Method: OECD Guide-line 208
GLP: yes

EC50 (Brassica napus): 235 mg/kg
Exposure time: 19 d
Analytical monitoring: no
Method: OECD Guide-line 208
GLP: yes

Sediment toxicity:

Remarks: Not applicable

Toxicity to terrestrial organisms:

Remarks: Not applicable

Persistence and degradability

Product:

Biodegradability:

Biodegradation: 90 - 100 %
Method: OECD Test Guideline 301A
Remarks: The data refer to the solvent

Components:

2-Phenoxyethanol:

Biodegradability:

aerobic
Inoculum: activated sludge
Concentration: 30 mg/l
Biochemical Oxygen Demand (BOD)
Result: Readily biodegradable
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

aerobic
Inoculum: activated sludge
Concentration: 20 mg DOC/l
DOC decrease
Result: Readily biodegradable
Biodegradation: > 90 %
Exposure time: 15 d
Method: OECD Test Guideline 301A
Physico-chemical removability

Remarks: Biodegradable

Stability in water

Test Type: abiotic
Degradation half life (DT50): > 365 d (50 °C) pH: 4 - 9
Method: OECD Test Guideline 111
GLP: yes

Photodegradation

Test Type: air
Light source: Sunlight
Sensitiser: OH
Concentration: 500000 molecules/cm³
Rate constant: 3.26727E-11 cm³/(molecule*sec)
Rate constant: 50 % Degradation half life: 11.8 h
Method: other (calculated)
GLP: no

Test Type: water
Light source: Other
Light spectrum: 298 - 400 nm
Rate constant: 50 % Degradation half life: 5,120 d
Method: other (measured)
GLP: No information available.

Bioaccumulative potential

Product:

Bioaccumulation
Remarks: not available

Components:

2-Phenoxyethanol:

Bioaccumulation
Species: Other
Bioconcentration factor (BCF): 0.35
Method: calculated
GLP: no

Mobility in soil

Product:

Distribution among environmental compartments
Remarks: not tested.

Components:

2-Phenoxyethanol:

Distribution among environmental compartments
adsorption
Medium: water - soil
log Koc: 1.6
Method: OECD Test Guideline 121
Other adverse effects

Product:
Environmental fate and pathways : Remarks: no data available

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil. Biologically degradable, when diluted may be degraded in biological purification plants

Components:
2-Phenoxyethanol:
Environmental fate and pathways : no data available

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

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

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.
Properly containerize and label waste material.
Dispose of any waste residues according to prescribed federal, state and local guidelines, e.g. appropriately permitted chemical waste incinerator.

Contaminated packaging : Regulations concerning reuse or disposal of used packaging materials must be observed.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse

SECTION 14. TRANSPORT INFORMATION

DOT : not restricted
IATA : not restricted
SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

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 311/312 Hazards: Acute Health Hazard
                    Chronic Health Hazard

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This product contains toxic chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372. Any such toxic chemical(s) are shown below. This information must be included in all MSDS’s that are copied and distributed for this material.

Glycol ethers (SARA 313 Category), total glycol ether compounds
Not Assigned  72 %

Clean Water Act
Contains no known priority pollutants at concentrations greater than 0.1%.

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

TSCA: This product is not listed on the Toxic Substances Control Act (TSCA) Inventory. It can not be used for any commercial purposes except as a bonafide cosmetic or cosmetic adjuvant, additive, or ingredient; or for use in research and development under the supervision of a technically qualified individual to understand its potential hazards.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
AICS - Australian Inventory of Chemical Substances; 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;
Further information

NFPA:

Flammability

Health

1

1

0

Instability

Special hazard.

Observe national and local legal requirements

Warning

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.

Revision Date : 02/25/2016

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express
or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. NO EXPRESS OR IMPLIED WARRANTY IS MADE OF THE MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY PRODUCT OR SERVICE. Nothing included in this information waives any of Clariant's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.

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