


## UF280 - Specialty Cleaner 280

### SECTION 1: IDENTIFICATION

- 1.1 GHS Product identifier:** UF280 - Specialty Cleaner 280
- 1.2 Recommended use of the chemical and restrictions on use:**  
Relevant uses: Chemical cleaning products  
Liquid detergent mixture for commercial car washes.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:**  
Cleaning Systems, Inc.  
1997 American Blvd  
54115 De Pere - United States  
Phone.: 9203372175 - Fax: 9203379410  
chemcompliance@cleaningsystemsinc.com  
http://cleaningsystemsinc.com
- 1.4 Emergency phone number:** 1-800-424-9300 or 1-703-527-3887

### SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 Classification of the substance or mixture:**  
**29 CFR 1910.1200:**  
Classification of this product has been carried out in accordance with paragraph (d) of § 1910.1200.  
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302  
Asp. Tox. 1: Aspiration hazard, Category 1, H304  
Eye Dam. 1: Serious eye damage, Category 1, H318  
Flam. Liq. 4: Flammable liquids, Category 4, H227  
Repr. 1B: Reproductive toxicity, Category 1B, H360  
Skin Irrit. 2: Skin irritation, Category 2, H315  
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 Label elements:**  
**29 CFR 1910.1200:**  
**Danger**
- 
- Hazard statements:**  
Acute Tox. 4: H302 - Harmful if swallowed  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways  
Eye Dam. 1: H318 - Causes serious eye damage  
Flam. Liq. 4: H227 - Combustible liquid  
Repr. 1B: H360 - May damage fertility or the unborn child  
Skin Irrit. 2: H315 - Causes skin irritation  
Skin Sens. 1: H317 - May cause an allergic skin reaction
- Precautionary statements:**  
P201: Obtain special instructions before use  
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352: IF ON SKIN: Wash with plenty of soap and water  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313: IF exposed or concerned: Get medical advice/attention  
P370+P378: In case of fire: Use ABC powder extinguisher to put it out  
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively
- Substances that contribute to the classification**

- CONTINUED ON NEXT PAGE -

UF280 - Specialty Cleaner 280

SECTION 2: HAZARD(S) IDENTIFICATION (continued)

Ethanediol; Pine oil; Ethoxylated Alcohol; 2-butoxyethanol

**Acute Toxicity Estimate (ATE mix):**

6.51 % (oral), 30.04 % (dermal), 44.04 % (inhalation) of the mixture consists of ingredient(s) of unknown toxicity

**2.3 Other hazards which do not result in classification:**

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances:**

Non-applicable

**3.2 Mixtures:**

**Chemical description:** Aqueous mixture composed of chemical products for cleaning products

**Components:**

Remaining components are non-hazardous and/or present at amounts below reportable limits. The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. Therefore, in accordance with Appendix D to § 1910.1200, the product contains:

| Identification   | Chemical name/Classification  | Concentration |
|------------------|---|---------------|
| CAS: 107-21-1    | <b>Ethanediol</b><br>Acute Tox. 4: H302 - Warning   | 10 - <15 %    |
| CAS: 8002-09-3   | <b>Pine oil</b><br>Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Sens. 1: H317 - Danger                     | 10 - <15 %    |
| CAS: Proprietary | <b>Ethoxylated Alcohol</b><br>Acute Tox. 4: H302; Eye Dam. 1: H318 - Danger   | 5 - <10 %     |
| CAS: Proprietary | <b>C-21 dibasic fatty acid, potassium salt</b><br>Eye Irrit. 2: H319; Skin Irrit. 2: H315; STOT SE 3: H335 - Warning          | 5 - <10 %     |
| CAS: 111-76-2    | <b>2-butoxyethanol</b><br>Acute Tox. 4: H302+H312+H332; Eye Irrit. 2: H319; Flam. Liq. 4: H227; Skin Irrit. 2: H315 - Warning | <5 %          |
| CAS: 12179-04-3  | <b>Disodium tetraborate pentahydrate</b><br>Eye Irrit. 2: H319; Repr. 1B: H360 - Danger                                       | <5 %          |

To obtain more information on the hazards of the substances consult sections 8, 11, 12, 15 and 16.

SECTION 4: FIRST-AID MEASURES

**4.1 Description of necessary measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

- CONTINUED ON NEXT PAGE -

## UF280 - Specialty Cleaner 280

### SECTION 4: FIRST-AID MEASURES (continued)

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

**4.2 Most important symptoms/effects, acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary:**

Non-applicable

### SECTION 5: FIRE-FIGHTING MEASURES

**5.1 Suitable (and unsuitable) extinguishing media:**

Combustible liquid. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

**5.2 Specific hazards arising from the chemical:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Special protective equipment and precautions for fire-fighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...)

**Additional provisions:**

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Only properly trained personnel should be involved in firefighting. Evacuate nonessential personnel from the fire area. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertization agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

**6.2 Environmental precautions:**

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

**6.3 Methods and materials for containment and cleaning up:**

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

**6.4 Reference to other sections:**

See sections 8 and 13.

### SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling:**

A.- Precautions for safe manipulation

Comply with the current standards 29 CFR 1910 Occupational Safety and Health Standards. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

- CONTINUED ON NEXT PAGE -

**UF280 - Specialty Cleaner 280**

**SECTION 7: HANDLING AND STORAGE (continued)**

**B.- Technical recommendations for the prevention of fires and explosions**

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Avoid splashes and pulverizations. Consult section 10 for conditions and materials that should be avoided.

**C.- Technical recommendations to prevent ergonomic and toxicological risks**

**PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT.** Transfer in fixed places that comply with the necessary security conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to containers of small amounts. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

**D.- Technical recommendations to prevent environmental risks**

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

**7.2 Conditions for safe storage, including any incompatibilities:**

**A.- Technical measures for storage**

Minimum Temp.: -4 °F  
Maximum Temp.: 120 °F

**B.- General conditions for storage**

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the workplace

| Identification | Environmental limits             |                |        |
|----------------|----------------------------------|----------------|--------|
|                | 2-butoxyethanol<br>CAS: 111-76-2 | 8-hour TWA PEL | 50 ppm |
|                | Ceiling Values - TWA PEL         |                |        |

**8.2 Appropriate engineering controls:**


**A.- Individual protection measures, such as personal protective equipment**

As a preventative measure it is recommended to use basic Personal Protection Equipment. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation, the information on clothing performance must be combined with professional judgment, and a clear understanding of the clothing application, to provide the best protection to the worker. All chemical protective clothing use must be based on a hazard assessment to determine the risks for exposure to chemicals and other hazards. Conduct hazard assessments in accordance with 29 CFR 1910.132.

**B.- Respiratory protection**

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

**C.- Specific protection for the hands**

| Pictogram  | PPE                                   | Remarks   |
|--|---------------------------------------|---|
| <br>Mandatory hand protection | Protective gloves against minor risks | Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional /industrial users, we recommend using chemical protection gloves. Use gloves in accordance with manufacturer's use limitations and OSHA standard 1910.138 (29CFR) |


As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application

**D.- Ocular and facial protection**

- CONTINUED ON NEXT PAGE -

UF280 - Specialty Cleaner 280



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

| Pictogram  | PPE   | Remarks   |
|--|---|---|
| <br>Mandatory face protection | Panoramic glasses against splash/projections. | Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. Use this PPE in accordance with manufacturer's use limitations and OSHA standard 1910.133 (29CFR) |

E.- Bodily protection

| Pictogram | PPE                  | Remarks                                       |
|-----------|----------------------|---|
|           | Work clothing        | Replace before any evidence of deterioration. |
|           | Anti-slip work shoes | Replace before any evidence of deterioration. |

F.- Additional emergency measures

| Emergency measure   | Standards                      | Emergency measure  | Standards                     |
|---|--------------------------------|--|-------------------------------|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2002 | <br>Eyewash stations | DIN 12 899<br>ISO 3864-1:2002 |

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 68 °F: Liquid  
 Appearance: Transparent  
 Color: Green  
 Odor: Pine  
 Odour threshold: Non-applicable \*

Volatility:

Boiling point at atmospheric pressure: 251 °F  
 Vapour pressure at 68 °F: 2095 Pa  
 Vapour pressure at 122 °F: 82.81 (11.04 kPa)  
 Evaporation rate at 68 °F: Non-applicable \*

Product description:

Density at 68 °F: 1051 kg/m<sup>3</sup>  
 Relative density at 68 °F: 1.051  
 Dynamic viscosity at 68 °F: Non-applicable \*  
 Kinematic viscosity at 68 °F: Non-applicable \*  
 Kinematic viscosity at 104 °F: <20.5 cSt  
 Concentration: Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

- CONTINUED ON NEXT PAGE -

**UF280 - Specialty Cleaner 280**

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

|  |                    |
|--|--------------------|
| pH:  | 8 - 9 at 100 %     |
| Vapour density at 68 °F:                     | Non-applicable *   |
| Partition coefficient n-octanol/water 68 °F: | Non-applicable *   |
| Solubility in water at 68 °F:                | Non-applicable *   |
| Solubility properties:                       | Non-applicable *   |
| Decomposition temperature:                   | Non-applicable *   |
| Melting point/freezing point:                | Non-applicable *   |
| Explosive properties:                        | Non-applicable *   |
| Oxidising properties:                        | Non-applicable *   |
| <b>Flammability:</b>                         |                    |
| Flash Point:                                 | 167 °F (ASTM D-92) |
| Flammability (solid, gas):                   | Non-applicable *   |
| Autoignition temperature:                    | 460 °F             |
| Lower flammability limit:                    | Non-applicable *   |
| Upper flammability limit:                    | Non-applicable *   |
| <b>Explosive:</b>                            |                    |
| Lower explosive limit:                       | Non-applicable *   |
| Upper explosive limit:                       | Non-applicable *   |
| <b>9.2 Other information:</b>                |                    |
| Surface tension at 68 °F:                    | Non-applicable *   |
| Refraction index:                            | Non-applicable *   |

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

| Shock and friction | Contact with air | Increase in temperature | Sunlight            | Humidity       |
|--------------------|------------------|-------------------------|---------------------|----------------|
| Not applicable     | Not applicable   | Risk of combustion      | Avoid direct impact | Not applicable |

**10.5 Incompatible materials:**

| Acids              | Water          | Oxidising materials | Combustible materials | Others                        |
|--------------------|----------------|---------------------|-----------------------|-------------------------------|
| Avoid strong acids | Not applicable | Avoid direct impact | Not applicable        | Avoid alkalis or strong bases |

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects:**

- CONTINUED ON NEXT PAGE -

**UF280 - Specialty Cleaner 280**

**SECTION 11: TOXICOLOGICAL INFORMATION (continued)**

The experimental information related to the toxicological properties of the product itself is not available

Contains glycols. With possibility of effects that are hazardous to the health, it is recommended not to breathe the vapours for long periods of time.

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

**A- Ingestion (acute effect):**

- Acute toxicity : The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

**B- Inhalation (acute effect):**

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.

**C- Contact with the skin and the eyes (acute effect):**

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces serious eye damage after contact.

**D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.  
IARC: 2-butoxyethanol (3); Brilliant blue FCF (C.I.4290/C.I. Acid Blue 9) (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: May damage fertility or the unborn child

**E- Sensitizing effects:**

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

**F- Specific target organ toxicity (STOT) - single exposure:**

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.

**G- Specific target organ toxicity (STOT)-repeated exposure:**

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**H- Aspiration hazard:**

The consumption of a considerable dose can cause pulmonary damage.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

| Identification | Acute toxicity  |                | Genus  |
|----------------|-----------------|----------------|--------|
|                | LD50 oral       | LD50 dermal    |        |
| Ethanediol     | 500 mg/kg       |                | Rat    |
| CAS: 107-21-1  |                 | 9530 mg/kg     | Rabbit |
|                | LC50 inhalation | Non-applicable |        |

- CONTINUED ON NEXT PAGE -

UF280 - Specialty Cleaner 280

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

| Identification                                       | Acute toxicity  |                  | Genus  |
|--|-----------------|------------------|--------|
|  | LD50 oral       | LD50 dermal      |        |
| 2-butoxyethanol<br>CAS: 111-76-2                     | LD50 oral       | 1414 mg/kg       | Rat    |
|  | LD50 dermal     | 1060 mg/kg       | Rabbit |
|  | LC50 inhalation | 11 mg/L (4 h)    | Rat    |
| Disodium tetraborate pentahydrate<br>CAS: 12179-04-3 | LD50 oral       | 3450 mg/kg       | Rat    |
|  | LD50 dermal     | Non-applicable   |        |
|  | LC50 inhalation | Non-applicable   |        |
| Ethoxylated Alcohol<br>CAS: Proprietary              | LD50 oral       | 500 mg/kg (ATEi) |        |
|  | LD50 dermal     | Non-applicable   |        |
|  | LC50 inhalation | Non-applicable   |        |
| Pine oil<br>CAS: 8002-09-3                           | LD50 oral       | 3200 mg/kg       | Rat    |
|  | LD50 dermal     | Non-applicable   |        |
|  | LC50 inhalation | Non-applicable   |        |

Acute Toxicity Estimate (ATE mix):

| ATE mix    |  | Ingredient(s) of unknown toxicity |
|------------|--|-----------------------------------|
| Oral       | 2072.86 mg/kg (Calculation method)     | 6.51 %                            |
| Dermal     | 16479.47 mg/kg (Calculation method)    | 30.04 %                           |
| Inhalation | 136.79 mg/L (4 h) (Calculation method) | 44.04 %                           |

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Ecotoxicity (aquatic and terrestrial, where available):

| Identification                   | Acute toxicity |                    | Species                         | Genus      |
|----------------------------------|----------------|--------------------|---------------------------------|------------|
|                                  | LC50           | EC50               |                                 |            |
| Ethanediol<br>CAS: 107-21-1      | LC50           | 53000 mg/L (96 h)  | Pimephales promelas             | Fish       |
|                                  | EC50           | 51000 mg/L (48 h)  | Daphnia magna                   | Crustacean |
|                                  | EC50           | 24000 mg/L (168 h) | Selenastrum capricornutum       | Algae      |
| 2-butoxyethanol<br>CAS: 111-76-2 | LC50           | 1490 mg/L (96 h)   | Lepomis macrochirus             | Fish       |
|                                  | EC50           | 1815 mg/L (48 h)   | Daphnia magna                   | Crustacean |
|                                  | EC50           | 911 mg/L (72 h)    | Pseudokirchneriella subcapitata | Algae      |

12.2 Persistence and degradability:

| Identification                   | Degradability |             | Biodegradability |          |
|----------------------------------|---------------|-------------|------------------|----------|
|                                  | BOD5          | COD         | Concentration    | Period   |
| Ethanediol<br>CAS: 107-21-1      | BOD5          | 0.47 g O2/g | Concentration    | 100 mg/L |
|                                  | COD           | 1.29 g O2/g | Period           | 14 days  |
|                                  | BOD5/COD      | 0.36        | % Biodegradable  | 90 %     |
| 2-butoxyethanol<br>CAS: 111-76-2 | BOD5          | 0.71 g O2/g | Concentration    | 100 mg/L |
|                                  | COD           | 2.2 g O2/g  | Period           | 14 days  |
|                                  | BOD5/COD      | 0.32        | % Biodegradable  | 96 %     |

12.3 Bioaccumulative potential:

| Identification                   | Bioaccumulation potential |         |
|----------------------------------|---------------------------|---------|
|                                  | BCF                       | Pow Log |
| Ethanediol<br>CAS: 107-21-1      | BCF                       | 10      |
|                                  | Pow Log                   | -1.36   |
|                                  | Potential                 | Low     |
| 2-butoxyethanol<br>CAS: 111-76-2 | BCF                       | 3       |
|                                  | Pow Log                   | 0.83    |
|                                  | Potential                 | Low     |

12.4 Mobility in soil:

| Identification              | Absorption/desorption |                      | Volatility |                                 |
|-----------------------------|-----------------------|----------------------|------------|---------------------------------|
|                             | Koc                   | Conclusion           | Henry      | Dry soil                        |
| Ethanediol<br>CAS: 107-21-1 | Koc                   | 0                    | Henry      | 1.327E-1 Pa·m <sup>3</sup> /mol |
|                             | Conclusion            | Very High            | Dry soil   | No                              |
|                             | Surface tension       | 4.989E-2 N/m (77 °F) | Moist soil | No                              |

- CONTINUED ON NEXT PAGE -



UF280 - Specialty Cleaner 280

SECTION 12: ECOLOGICAL INFORMATION (continued)

| Identification | Absorption/desorption            |                      | Volatility |       |
|----------------|----------------------------------|----------------------|------------|-------|
|                | 2-butoxyethanol<br>CAS: 111-76-2 | Koc                  | 8          | Henry |
|                | Conclusion                       | Very High            | Dry soil   | No    |
|                | Surface tension                  | 2.729E-2 N/m (77 °F) | Moist soil | Yes   |

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See epigraph 6.2.

**Regulations related to waste management:**

Legislation related to waste management:

40 CFR Part 261- IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

SECTION 14: TRANSPORT INFORMATION

**Transport of dangerous goods by land:**

With regard to 49 CFR on the Transport of Dangerous Goods:

- 14.1 UN number: Non-applicable
- 14.2 UN proper shipping name: Non-applicable
- 14.3 Transport hazard class(es): Non-applicable  
Labels: Non-applicable
- 14.4 Packing group, if applicable: Non-applicable
- 14.5 Environmental hazard: No
- 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises  
Physico-Chemical properties: see section 9
- 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 38-16:

- CONTINUED ON NEXT PAGE -

**UF280 - Specialty Cleaner 280**

**SECTION 14: TRANSPORT INFORMATION (continued)**

- 14.1 **UN number:** Non-applicable
- 14.2 **UN proper shipping name:** Non-applicable
- 14.3 **Transport hazard class(es):** Non-applicable  
Labels: Non-applicable
- 14.4 **Packing group, if applicable:** Non-applicable
- 14.5 **Environmental hazard:** No
- 14.6 **Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**  
Physico-Chemical properties: see section 9
- 14.7 **Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2019:

- 14.1 **UN number:** Non-applicable
- 14.2 **UN proper shipping name:** Non-applicable
- 14.3 **Transport hazard class(es):** Non-applicable  
Labels: Non-applicable
- 14.4 **Packing group, if applicable:** Non-applicable
- 14.5 **Environmental hazard:** No
- 14.6 **Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**  
Physico-Chemical properties: see section 9
- 14.7 **Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations specific for the product in question:**

SARA Title III - Toxic Chemical Release Inventory Reporting (Section 313): Ethanediol ; 2-butoxyethanol  
California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986): Ethanediol  
The Toxic Substances Control Act (TSCA) : Ethanediol ; Ethoxylated Alcohol ; C-21 dibasic fatty acid, potassium salt ; 2-butoxyethanol  
Massachusetts RTK - Substance List: Ethanediol  
New Jersey Worker and Community Right-to-Know Act: Ethanediol ; Pine oil ; 2-butoxyethanol ; Disodium tetraborate pentahydrate  
New York RTK - Substance list: Ethanediol ; Pine oil ; 2-butoxyethanol  
Pennsylvania Worker and Community Right-to-Know Law: Ethanediol ; 2-butoxyethanol  
CANADA-Domestic Substances List (DSL): Ethanediol ; Pine oil ; Ethoxylated Alcohol ; C-21 dibasic fatty acid, potassium salt ; 2-butoxyethanol  
CANADA-Non-Domestic Substances List (NDSL): Non-applicable  
NTP (National Toxicology Program): Non-applicable  
Minnesota - Hazardous substances ERTK: Ethanediol ; 2-butoxyethanol  
Rhode Island - Hazardous substances RTK: Ethanediol ; 2-butoxyethanol  
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Non-applicable  
Hazardous substances release notification under CERCLA sections 102-103 (40 CFR Part 302): Ethanediol (5000 pounds)

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

- CONTINUED ON NEXT PAGE -

## UF280 - Specialty Cleaner 280

### SECTION 15: REGULATORY INFORMATION (continued)

The Toxic Substances Control Act (TSCA)  
Occupational Safety and Health Standards (1910 Subpart Z - Toxic and Hazardous Substances)

### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Appendix d to §1910.1200 - Safety data sheets

#### Texts of the legislative phrases mentioned in section 2:

H318: Causes serious eye damage  
H360: May damage fertility or the unborn child  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H302: Harmful if swallowed  
H304: May be fatal if swallowed and enters airways  
H227: Combustible liquid

#### Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

#### 29 CFR 1910.1200:

Acute Tox. 4: H302 - Harmful if swallowed  
Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled  
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways  
Eye Dam. 1: H318 - Causes serious eye damage  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Flam. Liq. 3: H226 - Flammable liquid and vapour  
Flam. Liq. 4: H227 - Combustible liquid  
Repr. 1B: H360 - May damage fertility or the unborn child  
Skin Irrit. 2: H315 - Causes skin irritation  
Skin Sens. 1: H317 - May cause an allergic skin reaction  
STOT SE 3: H335 - May cause respiratory irritation

#### Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

#### Principal bibliographical sources:

Occupational Safety & Health Administration (OSHA).

#### Abbreviations and acronyms:

IMDG: International maritime dangerous goods code  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organisation  
COD: Chemical Oxygen Demand  
BOD5: 5-day biochemical oxygen demand  
BCF: Bioconcentration factor  
LD50: Lethal Dose 50  
CL50: Lethal Concentration 50  
EC50: Effective concentration 50  
Log-POW: Octanol-water partition coefficient  
Koc: Partition coefficient of organic carbon

Manufacturer Disclaimer: The information contained in this safety data sheet ("SDS") is based on sources, technical knowledge and current legislation. Furthermore, is based on data believed to be accurate; thus, the company does not assume any liability for its accuracy. The information provided herein cannot be considered a guarantee of the properties of this product and the same is simply a description of the security requirements. The use, occupational methodology and/or conditions for users of this product are not within our awareness or control. It is ultimately the responsibility of the user(s) to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information of this SDS only refers to this product, which should not be used for purposes other than those specified. Finally, the manner in which this product is used and whether there is any infringement of patents is the sole responsibility of the user(s).

END OF SAFETY DATA SHEET