



SAFETY DATA SHEET

1. Identification

| | | |
|--------------------------------------|--|----------------|
| Product Identifier | Liquid Live Apple Blossom | |
| Other means of identification | | |
| Product code | CU-1410 | |
| Recommended use | Non-pathogenic bacteria spotter and drain cleaner. | |
| Recommended restrictions | Professional use only. | |
| Manufacturer information | | |
| Company name | Chemical Universe, Inc. | |
| Address | 1133 Saline St. North Kansas City, MO 64116 | |
| Telephone | (816) 471-3602 | |
| Fax | (816) 474-3302 | |
| Emergency phone number | PERS | (800) 633-8253 |
| | 24 hour Emergency | (800) 633-8253 |

2. Hazard(s) Identification

| | | |
|--|---|------------|
| Physical hazards | Not classified. | |
| Health hazards | Skin irritant | Category 3 |
| Environmental hazards | Not classified | |
| OSHA defined hazards | Not listed. | |
| Label elements | None | |
| Signal word | Warning. | |
| Hazard statement | Causes mild skin irritation. | |
| Precautionary statement | | |
| Prevention | | |
| Response | If skin irritation occurs: Get medical advice/attention | |
| Storage | | |
| Disposal | | |
| Hazard(s) not otherwise classified (HNOC) | None | |
| Supplemental information | None | |

3. Composition/information on ingredients

Mixtures

| Chemical name | CAS number | % |
|--|-------------------|----------|
| 2-butoxyethanol | 111-76-2 | 1-2 |
| Other components below reportable levels | | 90-100 |

4. First-aid measures

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|---|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. |
| Eye contact | Rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention. Eye wash stations should be located in work area. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting. |
| Most important symptoms/effects, acute and | Dermatitis. Rash. May cause an allergic skin reaction. |

delayed

Indication of immediate medical attention and special treatment needed Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.

Fire-fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear appropriate protective equipment and clothing during clean-up. Wear eye/face protection.

Methods and materials for containment and cleaning up Caution – spillages may be slippery.

Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas.

Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Do not release into the environment (see section 12). Avoid discharge into areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Do not store in extreme conditions.

8. Exposure controls/personal protection

Occupational exposure limits

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value |
|-----------------|------|--------|
| 2-butoxyethanol | PEL | 50 ppm |

US ACGIH Threshold Limit Values

| Components | Type | Value |
|-----------------|------|--------|
| 2-butoxyethanol | STEL | 20 ppm |

Biological limit values

ACGIH Biological Exposure Indices

| Components | Value | Determinant | Species | Sampling Time |
|-----------------|----------|-------------|---------|---------------|
| 2-butoxyethanol | 200 mg/g | Creatinine | Urine | End of shift. |

Appropriate engineering controls Emergency eye wash stations and showers should be readily accessible. Provide natural or mechanical ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other None.

Respiratory protection Respiratory protection not required.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke or use chewing tobacco. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

| | |
|--|------------------------|
| Physical State | Milky liquid. |
| Color | White . |
| Odor | Apple Blossom. |
| Odor threshold | Not available. |
| pH | 6-7 |
| Melting/freezing point | Not available. |
| Initial boiling point and boiling range | >212°F (100°C) |
| Flash point | >385°F (196°C) |
| Evaporation rate | Not available. |
| Flammability | Not available. |
| Flammability Limits | |
| Upper | Not available. |
| Lower | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Specific gravity (water=1) | 1.0 |
| Solubility in water | Soluble . |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Decomposes on heating. |
| Viscosity | Not available. |

10. Stability and reactivity

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|---|---|
| Reactivity | This product is stable and non-reactive under normal conditions of use. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Heat, flames can cause product to decompose. |
| Incompatible materials | Strong acids, strong bases, strong oxidizing agents. |
| Hazardous decomposition products | Carbon dioxide, carbon monoxide. |

11. Toxicological information

Information on likely routes of exposure

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|---|---|
| Ingestion | Expected to be a low ingestion hazard. |
| Inhalation | Expected to be a low inhalation hazard. |
| Skin contact | Repeated and/or prolonged skin contact may cause slight irritation. |
| Eye contact | Repeated and/or prolonged eye contact may cause slight irritation. |
| Symptoms related to the physical, chemical and toxicological characteristics | Dermatitis. Rash. May cause an allergic skin reaction. |
| Acute toxicity | Not established. |

| Product | Route and Species | LD₅₀ |
|---|--------------------------|------------------------|
| Liquid Live Apple Blossom (CAS mixture) | | |
| Acute | <i>Oral, rat</i> | 48,500 mg/kg estimated |
| | <i>Dermal, rat</i> | >5,000 mg/kg estimated |

*Estimates for product may be based on additional component data not shown

| | |
|---|--------------------------------------|
| Skin corrosion/irritation | May cause mild skin irritation. |
| Serious eye damage/irritation | Not classified. |
| Respiratory sensitization | Not classified. |
| Skin sensitization | Not classified. |
| Germ cell mutagenicity | Not classified. |
| Carcinogenicity | Not considered a carcinogen. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | |
| Not Listed. | |
| Reproductive toxicity | Not classified. |
| Specific target organ toxicity – single exposure | Not classified. |
| Specific target organ toxicity – repeated exposure | Not classified. |
| Aspiration hazard | Not considered an aspiration hazard. |

12. Ecological information

Ecotoxicity

| Product | Species | Test Results |
|---|----------------|---------------------|
| Liquid Live Apple Blossom (CAS mixture) | | |

| | | |
|----------------|---------------------|---|
| Aquatic | | |
| Crustacea | Daphnia | EC ₅₀ (48hr): 980 mg/L estimated |
| Fish | Oncorhynchus mykiss | LC ₅₀ (96hr): 400 mg/L estimated |

*Estimates for product may be based on additional component data not shown

| | |
|--------------------------------------|--|
| Persistence and degradability | 2-butoxyethanol is considered readily biodegradable. |
| Bioaccumulative potential | Potential to bioaccumulate is low. |
| Mobility in soil | Not available. |
| Other adverse effects | Not available. |

13. Disposal considerations

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|---|---|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Do not release to the environment. |
| Local disposal regulations | Dispose in accordance with all applicable regulations |
| Waste from residues/unused product | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. (see: Disposal instructions). |
| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may contain product residue, follow label warnings even after container is emptied. |

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

SARA 302 Extremely hazardous substance

Not listed.

SARA 304 Emergency release notification

Not listed.

SARA 311/312 Hazard Categories

Immediate Hazard - Yes

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

SARA 313 (TRI reporting)

2-butoxyethanol (Glycol ether category)

16. Other information, including date of preparation or last revision

| | |
|----------------------|------------|
| Issue date | 12/29/2014 |
| Revision date | 12/29/2014 |
| Version # | 1 |
| HMIS® ratings | Health: 1 |

| | |
|-----------------------------|---|
| NFPA ratings | Flammability: 0 Physical hazard: 0 Health: 1 Flammability: 0 Instability: 0 |
| Disclaimer | The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information related only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified by the text. |
| Revision information | First issue |