

9. Physical and chemical properties

Appearance	Clear. Liquid
Physical state	Liquid.
Form	Liquid.
Color	Light yellow.
Odor	Citrus
Odor threshold	Not available.
pH	7.5 - 8.5
Melting point/freezing point	32 °F (0 °C) estimated / 32 °F (0 °C)
Initial boiling point and boiling range	Not available.
Flash point	No Flash Point
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.00001 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.42 lbs/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	93.87 % estimated
Specific gravity	1.01
VOC	0.2 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test Results
Butoxydiglycol (CAS 112-34-5)		
Acute		
Dermal		
LD50	Rabbit	2700 mg/kg
Oral		
LD50	Rat	3306 mg/kg
Citric Acid (CAS 77-92-9)		
Acute		
Oral		
LD50	Rat	6730 mg/kg
Ethylene Oxide (CAS 75-21-8)		
Acute		
Inhalation		
LC50	Rat	1450 ppm, 4 Hours
Oral		
LD50	Rat	72 mg/kg
Sodium Carbonate (CAS 497-19-8)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	2.3 mg/l, 2 Hours
Oral		
LD50	Rat	2800 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Causes eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Ethylene Oxide (CAS 75-21-8)	1 Carcinogenic to humans.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)		
Ethylene Oxide (CAS 75-21-8)	Cancer	
US. National Toxicology Program (NTP) Report on Carcinogens		
Ethylene Oxide (CAS 75-21-8)	Known To Be Human Carcinogen.	

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Alcohols, C9-11, ethoxylated (CAS 68439-46-3)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 2.9 - 8.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 6 - 12 mg/l, 96 hours
Butoxydiglycol (CAS 112-34-5)		
Aquatic		
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>) 1300 mg/l, 96 hours
Ethylene Oxide (CAS 75-21-8)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 73 - 96 mg/l, 96 hours
Sodium Carbonate (CAS 497-19-8)		
Aquatic		
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>) 156.6 - 298.9 mg/l, 48 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>) 300 mg/l, 96 hours
Undeceth-7 (CAS 34398-01-1)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 1.6 - 2.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 3.2 - 5 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Butoxydiglycol	0.56
Ethylene Oxide	-0.3

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

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.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	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	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butoxydiglycol (CAS 112-34-5) Listed.

Ethylene Oxide (CAS 75-21-8) Listed.

SARA 304 Emergency release notification

Ethylene Oxide (CAS 75-21-8) 10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Ethylene Oxide (CAS 75-21-8) Cancer
Reproductive toxicity
Mutagenicity
Central nervous system
Skin sensitization
Skin irritation
Eye irritation
respiratory tract irritation
Acute toxicity
Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Ethylene Oxide	75-21-8	10	1000		

SARA 311/312 Hazardous chemical

Classified hazard categories Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Butoxydiglycol	112-34-5	3 - < 5
Ethylene Oxide	75-21-8	< 0.1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Butoxydiglycol (CAS 112-34-5)

Ethylene Oxide (CAS 75-21-8)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Ethylene Oxide (CAS 75-21-8)

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Ethylene Oxide (CAS 75-21-8)

Other Flavoring Substances with OSHA PEL's

US state regulations

California Proposition 65



WARNING: This product can expose you to chemicals including Ethylene Oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Ethylene Oxide (CAS 75-21-8) Listed: July 1, 1987

California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene Oxide (CAS 75-21-8) Listed: August 7, 2009

California Proposition 65 - CRT: Listed date/Female reproductive toxin

Ethylene Oxide (CAS 75-21-8) Listed: February 27, 1987

California Proposition 65 - CRT: Listed date/Male reproductive toxin

Ethylene Oxide (CAS 75-21-8) Listed: August 7, 2009

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Butoxydiglycol (CAS 112-34-5)

Ethylene Oxide (CAS 75-21-8)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date	06-12-2020
Revision date	02-22-2023
Version #	05
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 0 Instability: 0
NFPA ratings	

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 relates 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 in the text.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.