Version 1.4 Revision Date: 04/08/2020

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Butoxyethanol

Use Description : ESBS-Cleaner for removal of vegetable or animal oil

from soiled surfaces.

Manufacturer or supplier's details

Company : JMN Specialties, Inc. **Address** 1100 Victory Drive

Westwego, LA 70094 United States of America

Emergency telephone number:

CHEMTEL: Toll Free US & Canada: (800) 255-3924,

Outside USA +01-813-248-0585.

Additional : Product Safety Group

Information: E-Mail: sales@jmnspecialties.com

SDS Requests: 1-504-341-3749

SDS Requests email: orders@jmnspecialties.com

Website: www.jmnspecialties.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

Acute toxicity : Category 4

(Inhalation)

Acute toxicity (Dermal) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

GHS Label element

Hazard pictograms



Signal word : Warning

Version 1.4 Revision Date: 04/08/2020

Hazard statements : H227 Combustible liquid.

H302 + H312 + H332 Harmful if swallowed, in contact

with skin or if inhaled H315 Causes skin irritation. H319 Causes serious eye irritation.

Precautionary statements

: Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/

spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ eye protection/ face protection.

Response:

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

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell.

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Version 1.4 Revision Date: 04/08/2020

Potential Health Effects

Carcinogenicity:

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.

ACGIH No component of this product present at levels greater

than or equal to 0.1% is identified as a carcinogen or

potential carcinogen by ACGIH.

OSHANo component of this product present at levels greater

than or equal to 0.1% is identified as a carcinogen or

potential carcinogen by OSHA.

NTP No component of this product present at levels greater

than or equal to 0.1% is identified as a known or antic-

ipated carcinogen by NTP.

Emergency Overview

CAUTION!			
Appearance	liquid		
Colour	colourless		
Odour	mild, sweet, ester-like, ether-like		
Hazard Summary	No information available.		

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
111-76-2	2-Butoxy ethanol	90 - 100
107-21-1	Ethylene glycol	0.1 - 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Show this safety data sheet to the doctor in atten-

dance.

Do not leave the victim unattended.

MSDS Number: 2-Butoxyethanol 3 / 21

Version 1.4 Revision Date: 04/08/2020

If inhaled : If unconscious place in recovery position and seek

medical advice.

If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.

> If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty

of water.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious per-

If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing

media

: Use an extinguishing media appropriate for surround-

ing fire.

Unsuitable extinguishing

media

: High volume water jet

Hazardous combustion

products

: Carbon oxides

Specific extinguishing

methods

: Use a water spray to cool fully closed containers.

Further information : For safety reasons in case of fire, cans should be

stored separately in closed containments.

Special protective equip-

ment for firefighters

: Wear self-contained breathing apparatus for firefight-

ing if necessary.

NFPA Flammable and Combustible Liquids Classification:

Combustible Liquid Class IIIA

SECTION 6. ACCIDENTAL RELEASE MEASURES

MSDS Number: 2-Butoxyethanol 4 / 21

Version 1.4 Revision Date: 04/08/2020

Personal precautions, : Use personal protective equipment.

Version 1.4 Revision Date: 04/08/2020

protective equipment and emergency procedures

Environmental precau-

tions

: Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and

cleaning up

: Contain spillage, and then collect with noncombustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regula-

tions (see section 13).

Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid formation of aerosol.

Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in

the application area.

Provide sufficient air exchange and/or exhaust in work

rooms.

Dispose of rinse water in accordance with local and

national regulations.

Conditions for safe sto-

rage

: No smoking.

Keep container tightly closed in a dry and well-

ventilated place.

Observe label precautions.

Electrical installations / working materials must comp-

ly with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
111-76-2	2-Butoxyethanol	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m3	NIOSH REL
		TWA	50 ppm 240 mg/m3	OSHA Z-1
		TWA	25 ppm	OSHA P0

MSDS Number: 2-Butoxyethanol 6 / 21

Version 1.4 Revision Date: 04/08/2020

			120 mg/m3	
107-21-1	Ethylene glycol	TLV-C	50 ppm 125 mg/m3	OSHA P0
		С	100 mg/m3	ACGIH
		C (Aerosol only)	100 mg/m3	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parame-ters	Biological specimen	Sam- pling time	Permissi- ble con- centration	Basis
2-Butoxyethanol	111-76-	Butoxya- cetic acid (BAA)	Urine	End of shift (As soon as possible after expo- sure ceases)	200 mg/g Creatinine	ACGIH BEI

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally

required.

Hand protection

Remarks : The suitability for a specific workplace should be dis-

cussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal

processing problems.

Skin and body protection : impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work

place.

Hygiene measures : When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

MSDS Number: 2-Butoxyethanol 7 / 21

Version 1.4 Revision Date: 04/08/2020

Color : colorless

Odor : mild, sweet, ester-like, ether-like

Odor Threshold : 0.48 ppm

pH : No data available

Freezing Point (Melting point/freezing point)

: -75 - -74.8 °C (-103 - -102.6 °F)

Boiling Point (Boiling point/boiling range)

: 166 - 173.5 °C (331 - 344.3 °F)

Flash point : 62 - 70 °C (144 - 158 °F)

(1,013 hPa)

Evaporation rate : 0.153

n-Butyl Acetate

Flammability (solid, gas) : No data available

Burning rate : No data available

Upper explosion limit : 10.6 %(V)

Lower explosion limit : 1.1 - 1.3 %(V)

Vapor pressure : 0.599 mmHg @ 20 °C (68 °F)

Relative vapor density : 4(Air = 1.0)

Relative density : 0.9005 - 0.904 @ 20 °C (68 °F)

Reference substance: (water = 1)

Density : 7.514 lb/gal @ 20 °C (68 °F)

Bulk density : No data available

Solubility(ies)

Water solubility : 900 g/l completely soluble @ 25 °C (77 °F)

Solubility in other sol-

vents

: No data available

Partition coefficient: n-

octanol/water

: log Pow: 0.81 @ 25 °C (77 °F)

MSDS Number: 2-Butoxyethanol 8 / 21

Version 1.4 Revision Date: 04/08/2020

Auto-ignition temperature : 230 - 245 °C 1,013 hPa

Safety Data Sheet

2-Butoxyethanol

Version 1.4 Revision Date: 04/08/2020

Thermal decomposition : 124.7 °C

Viscosity

Viscosity, dynamic : 3.3 - 6.4 mPa.s @ 20 °C (68 °F)

Viscosity, kinematic : 2.3 - 3.7 mm2/s @ 20 - 40 °C (68 - 104 °F)

Surface tension : 65 mN/m

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 hazards to be specially mentioned.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong oxidizing agents

Acids Bases Amines Ammonia Acid chlorides

Hazardous decomposition

products

: Carbon monoxide, carbon dioxide and unburned hy-

drocarbons (smoke).

Aldehydes Ketones Organic acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 500 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 4500 ppm

Exposure time: 4 h

MSDS Number: 2-Butoxyethanol 10 / 21

Version 1.4 Revision Date: 04/08/2020

Test atmosphere: gas

Method: Calculation method

: Acute toxicity estimate : 1,100 mg/kg Acute dermal toxicity

Method: Calculation method

Components:

111-76-2:

: LD50 (rat): 745 mg/kg Acute oral toxicity

Assessment: The component/mixture is moderately

toxic after single ingestion.

Acute inhalation toxicity : LC50 (rat): 550 ppm

Exposure time: 4 h

Assessment: The component/mixture is moderately

toxic after short term inhalation.

Acute dermal toxicity : LD50 (rat): 1,250 mg/kg

Assessment: The component/mixture is moderately

toxic after single contact with skin.

107-21-1:

: LD50 (rat): 2,000 mg/kg Acute oral toxicity

Assessment: The component/mixture is moderately

toxic after single ingestion.

: LC50 (rat, male and female): > 2.5 mg/l Acute inhalation toxicity

Exposure time: 6 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute

inhalation toxicity

Acute dermal toxicity : LD50 (mouse, male and female): > 3,500 mg/kg

Assessment: The substance or mixture has no acute

dermal toxicity

Skin corrosion/irritation

Product:

Remarks: Irritating to skin.

Components:

111-76-2:

Species: rabbit

Result: Irritating to skin.

107-21-1: Species: rabbit Exposure

time: 20 h

MSDS Number: 2-Butoxyethanol 11 / 21

Version 1.4 Revision Date: 04/08/2020

Method: In vivo

Result: No skin irritation

Serious eye damage/eye irritation

Product:

Remarks: Irritating to eyes.

Components:

111-76-2:

Species: rabbit

Result: Irritating to eyes.

107-21-1:

Species: rabbit

Result: No eye irritation Exposure time: 24 h Method: In vivo

Respiratory or skin sensitization

Components:

111-76-2:

Test Type: Maximization test

Species: guinea pig

Result: Did not cause sensitization on laboratory animals.

107-21-1:

Test Type: Maximization Test (GPMT)

Species: guinea pig

Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Components:

111-76-2:

Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay

Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic

activation

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Test species: mouse (male)

Application Route: Intraperitoneal

Result: negative

Germ cell mutagenicity-

Assessment

: Tests on bacterial or mammalian cell cultures did not

show mutagenic effects.

MSDS Number: 2-Butoxyethanol 12 / 21

Version 1.4 Revision Date: 04/08/2020

107-21-1:

Genotoxicity in vitro : Test Type: Ames test

Metabolic activation: with and without metabolic

activation

Method: OECD Test Guideline 471

Result: negative

GLP: yes

Genotoxicity in vivo : Test Type: Dominant lethal assay

Test species: rat (male and female)

Application Route: Oral Exposure time: daily

Dose: 0, 40, 200, 1000 mg/kg

Result: negative

Germ cell mutagenicity-

Assessment

: Tests on bacterial or mammalian cell cultures did not

show mutagenic effects.

Carcinogenicity

Components:

111-76-2:

Species: mouse

Application Route: Inhalation

Exposure time: 2 yr Activity duration: 6 h

Frequency of Treatment: 5 days/week

NOAEL: 125 ppm

Result: Limited evidence of carcinogenic effects with no relevance to humans

Carcinogenicity - As- : Not classifiable as a human carcinogen.

107-21-1:

Species: mouse, (male and female)

Application Route: Oral Exposure time: 24 mths

Dose: 0, 40, 200, 1000 mg/kg Frequency of Treatment: daily

LOAEL: 1,000 mg/kg

Result: Ambiguous

Carcinogenicity - As- : Not classifiable as a human carcinogen.

MSDS Number: 2-Butoxyethanol 13 / 21

Version 1.4 Revision Date: 04/08/2020

Reproductive toxicity

Components:

111-76-2:

Effects on fertility : Test Type: Two-generation study

Species: mouse Application Route: oral

Fertility: NOAEL: 720 mg/kg body weight

Symptoms: Reduced fertility

Result: Reduced fertility at maternally toxic doses

Effects on fetal development

: Test Type: Embryo-fetal development

Species: rat

Application Route: Inhalation
Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day

Developmental Toxicity: Lowest observed adverse

effect level: 100 ppm

Result: Developmental toxicity occurred at maternal

toxicity dose levels

Reproductive toxicity -

Assessment

: No evidence of adverse effects on sexual function and

fertility, and on development, based on animal

experiments.

107-21-1:

Effects on fertility : Test Type: Three-generation study

Species: rat, male and female

Application Route: Oral

Dose: 0, 40, 200, 1000 mg/kg

General Toxicity - Parent: NOAEL: > 1,000 mg/kg

body weight

General Toxicity F1: NOAEL: > 1,000 mg/kg body

weight

Result: No reproductive effects.

Effects on foetal devel-

opment

: Species: rabbit

Application Route: Oral

Dose: 0, 100, 500, 1000, 2000 mg/kg Duration of Single Treatment: 10 d

General Toxicity Maternal: NOAEL: 1,000 mg/kg body

weiaht

Teratogenicity: NOAEL: 2,000 mg/kg body weight Developmental Toxicity: NOAEL: 2,000 mg/kg body

weight

Result: No teratogenic effects.

GLP: yes

Species: mouse

Application Route: inhalation (dust/mist/fume)

Dose: 0, 60, 400, 1000 ppm

MSDS Number: 2-Butoxyethanol 14 / 21

Version 1.4 Revision Date: 04/08/2020

Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day

General Toxicity Maternal: NOAEC: 60 ppm

Teratogenicity: NOAEC: 60 ppm

Developmental Toxicity: NOAEC: 60 ppm

Symptoms: Maternal toxicity, Malformations were ob-

served.

data.

Result: Teratogenic effects.

Reproductive toxicity - Assessment

: Fertility classification not possible from current data. Embryotoxicity classification not possible from current

STOT - single exposure

Product: No data available

Components:

111-76-2: No data available

107-21-1: No data available

STOT - repeated exposure

Product: No data available

Components:

111-76-2:No data available

107-21-1:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Oral	Kidney	May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.	

Repeated dose toxicity

Components:

111-76-2: Species: rat NOAEL: 30

Application Route: Inhalation

MSDS Number: 2-Butoxyethanol 15 / 21

Version 1.4 Revision Date: 04/08/2020

Exposure time: 14 wk

Number of exposures: 6 h/d, 5 d/wk

107-21-1:

Species: rat, male NOAEL: 150 mg/kg Application Route: Oral Exposure time:

12 mths Number of exposures: daily

Dose: 0, 50, 150, 300, 400 mg/kg bw Method: OECD Test Guideline 452

Target Organs: Kidney Symptoms: Kidney disorders

Repeated dose toxicity - : Harmful if swallowed.

Assessment

Aspiration toxicity

Components:

111-76-2:

No aspiration toxicity classification

107-21-1:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

111-76-2:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,474

mg/l

Exposure time: 96 h Test Type: static test

Method: OECD Test Guideline 203

GLP: no

Toxicity to daphnia and : EC50 (Daphnia magna (Water flea)): 1,800 mg/l

other aquatic inverte Exposure time: 48 h

MSDS Number: 2-Butoxyethanol 16 / 21

Version 1.4 Revision Date: 04/08/2020

brates Test Type: static test

Method: OECD Test Guideline 202

GLP: no

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)):

911 mg/l

End point: Biomass Exposure time: 72 h Test Type: static test Analytical

monitoring: yes

Method: OECD Test Guideline 201

GLP: no

107-21-1:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): >

100 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and

other aquatic invertebrates

: LC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae : (Pseudokirchneriella subcapitata (Selenastrum capri-

cornutum)): > 100 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test

Toxicity to bacteria : Toxicity threshold (Pseudomonas putida): > 10,000

mg/l

Exposure time: 16 h Test Type: Static Method: DIN 38412

Persistence and degradability

Components:

111-76-2:

Biodegradability : aerobic

Inoculum: Activated sludge, domestic, adaption not

specified

Result: Readily biodegradable. Biodegradation: 90.4 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

GLP: no

MSDS Number: 2-Butoxyethanol 17 / 21

Version 1.4 Revision Date: 04/08/2020

107-21-1:

Biodegradability : aerobic

Inoculum: Activated sludge, domestic, adaption not

specified

Biodegradation: 90 - 100 %

Exposure time: 10 d

GLP: yes

Remarks: Readily biodegradable

Bio accumulative potential

Components:

111-76-2:

Partition coefficient: n-

octanol/water

: log Pow: 0.83

107-21-1:

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 0.60

Exposure time: 61 d

Partition coefficient: n-

octanol/water

: log Pow: -1.36

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection

of Stratospheric Ozone - CAA Section 602 Class I Sub-

stances

Remarks This product neither contains, nor was manufactured

with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A

+ B).

Additional ecological in-

formation

: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local,

MSDS Number: 2-Butoxyethanol 18 / 21

Version 1.4 Revision Date: 04/08/2020

state and federal regulations.

Version 1.4 Revision Date: 04/08/2020

For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group

at 800-637-7922.

Contaminated packaging : Empty remaining contents.

Dispose of as unused product. Do not re-use empty containers.

Do not burn, or use a cutting torch on, the empty

drum.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

DOT (Department of Transportation): NA1993, Combustible liquid, n.o.s., (2-BUTOXYETHANOL), CBL, III

Special Notes: : The flash point for this material is greater than 100 F

(38 C). Therefore, in accordance with 49 CFR 173.150(f) non-bulk containers (<450L or <119 gallon capacity) of this material may be shipped as non-regulated when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Combustible Liquid, Toxic by inhalation., Moderate

skin irritant, Moderate eye irritant

WHMIS Classification : B3: Combustible Liquid

D1A: Very Toxic Material Causing Immediate and

Serious Toxic Effects

D2A: Very Toxic Material Causing Other Toxic Effects D2B: Toxic Material Causing Other Toxic Effects

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

CERCLA Reportable Quantity

Components	CAS-No.	Component	Calculated product

MSDS Number: 2-Butoxyethanol 20 / 21

Safety Data Sheet

2-Butoxyethanol

Version 1.4 Revision Date: 04/08/2020

		RQ (lbs)	RQ (lbs)
Ethylene glycol	107-21-1	5000	*

^{*:} Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 : Fire Hazard

Hazards Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject

to the reporting requirements of SARA Title III,

Section 302.

SARA 313 : The following components are subject to reporting

levels established by SARA Title III, Section 313:

111-76-2 2-Butoxy ethanol 100 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

107-21-1 Ethylene glycol 0.999

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):

111-76-2 2-Butoxy ethanol 100 % 107-21-1 Ethylene glycol 0.9999 %

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. Clean-Water Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

111-76-2 2-Butoxy ethanol 90 - 100 %

Pennsylvania Right To Know

111-76-2 2-Butoxy ethanol 90 - 100 % 107-21-1 Ethylene glycol 0.1 - 1 %

New Jersey Right To Know

111-76-2 2-Butoxy ethanol 90 - 100 %

MSDS Number: 2-Butoxyethanol 21 / 21

Version 1.4 Revision Date: 04/08/2020

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

United States TSCA Inventory Canadian Domestic Substances List (DSL) Canadian Domestic Substances List (DSL) Li y (positive listing) (All components of this product are on the Canadian DSL.) Australia Inventory of Chemical Substances (AICS) New Zealand. Inventory of Chemical Substances Li y (positive listing) (On the inventory or in compliance with the inventory) New Zealand. Inventory of Chemical Substances Li y (positive listing) (On the inventory, or in compliance with the inventory) Japan. ENCS - Existing and New Chemical Substances Inventory Li y (positive listing) (On the inventory, or in compliance with the inventory) Japan. ISHL - Inventory of Chemical Substances (METI) Li y (positive listing) (On the inventory, or in compliance with the inventory) Korea. Korean Existing Chemicals Inventory (KECI) Li y (positive listing) (On the inventory, or in compliance with the inventory) Philippines Inventory of Chemicals and Chemical Substances (PICCS) Li y (positive listing) (On the inventory, or in compliance with the inventory) China. Inventory of Existing Chemical Substances in China (IECSC) Li y (positive listing) (On the inventory, or in compliance with the inventory)	The components of this product are reported in the following	IIOV	ving inventories:
Australia Inventory of Chemical Substances (AICS) Propositive listing (On the inventory, or in compliance with the inventory) Image: Propositive listing (On the inv	United States TSCA Inventory	:	(On TSCA Inven-
Con the inventory, or in compliance with the inventory) New Zealand. Inventory of Chemical Substances	Canadian Domestic Substances List (DSL)	:	(All components of this product are on
Con the inventory, or in compliance with the inventory	Australia Inventory of Chemical Substances (AICS)	:	(On the inventory, or in compliance
Con the inventory, or in compliance with the inventory)	New Zealand. Inventory of Chemical Substances	:	(On the inventory, or in compliance
(METI) (On the inventory, or in compliance with the inventory) Korea. Korean Existing Chemicals Inventory (KECI) : y (positive listing) (On the inventory, or in compliance with the inventory) Philippines Inventory of Chemicals and Chemical Substances (PICCS) : y (positive listing) (On the inventory, or in compliance with the inventory, or in compliance with the inventory) China. Inventory of Existing Chemical Substances in China (IECSC) : y (positive listing) (On the inventory, or in compliance)	· ·	:	(On the inventory, or in compliance
Philippines Inventory of Chemicals and Chemical Substances (PICCS) : y (positive listing) (On the inventory, or in compliance with the inventory, or in compliance with the inventory) China. Inventory of Existing Chemical Substances in China (IECSC) : y (positive listing) (On the inventory, or in compliance)		:	(On the inventory, or in compliance
Substances (PICCS) (On the inventory, or in compliance with the inventory) China. Inventory of Existing Chemical Substances in China (IECSC) : y (positive listing) (On the inventory, or in compliance)	Korea. Korean Existing Chemicals Inventory (KECI)	:	(On the inventory, or in compliance
China (IECSC) (On the inventory, or in compliance		:	(On the inventory, or in compliance
		:	(On the inventory, or in compliance

MSDS Number: 2-Butoxyethanol 22 / 21

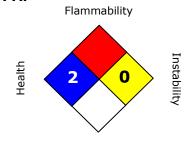
Version 1.4 Revision Date: 04/08/2020

Switzerland. New notified substances and declared	y (positive listing)
preparations	(The formulation
	contains substances
	listed on the Swiss
	Inventory)

SECTION 16. OTHER INFORMATION

Further information





Special hazard.

HMIS III:

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Version 1.4 Revision Date: 04/08/2020

Key or le	gend to abbreviations and ac	ronyms use	ed in the safety data sheet		
ACGIH	American Conference of Gov-	LD50	Lethal Dose 50%		
	ernment Industrial Hygienists				
AICS	Australia, Inventory of Chem-	LOAEL	Lowest Observed Adverse Effect		
	ical Substances		Level		
DSL	Canada, Domestic Sub-	NFPA	National Fire Protection Agency		
	stances List				
NDSL	Canada, Non-Domestic Sub-	NIOSH	National Institute for Occupational		
	stances List		Safety & Health		
CNS	Central Nervous System	NTP	National Toxicology Program		
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals		
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level		
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration		
EGEST	EOSCA Generic Exposure	OSHA	Occupational Safety & Health		
	Scenario Tool		Administration		
EOSCA	European Oilfield Specialty	PEL	Permissible Exposure Limit		
	Chemicals Association				
EINECS	European Inventory of Exist-	PICCS	Philippines Inventory of Commercial		
	ing Chemical Substances		Chemical Substances		
MAK	Germany Maximum Concen-	PRNT	Presumed Not Toxic		
	tration Values				
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act		
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit		
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and		
			Reauthorization Act.		
IARC	International Agency for Re-	TLV	Threshold Limit Value		
	search on Cancer				
IECSC	Inventory of Existing Chemi-	TWA	Time Weighted Average		
	cal Substances in China				
ENCS	Japan, Inventory of Existing	TSCA	Toxic Substance Control Act		
	and New Chemical Sub-				
	stances				
KECI	Korea, Existing Chemical In-	UVCB	Unknown or Variable Composition,		
	ventory		Complex Reaction Products, and		
	ļ. <u>-</u> , - , -		Biological Materials		
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials In-		
			formation System		
LC50	LC50 Lethal Concentration 50%				