

Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	1-5
Titanium dioxide	13463-67-7	1-5
Quartz	14808-60-7	<1.3

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
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 protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Cool material exposed to heat with water spray and remove it if no risk is involved.
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	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>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. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value	Form
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m ³	
Calcium carbonate (CAS 1317-65-3)	PEL	50 ppm 5 mg/m ³	Respirable fraction.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	15 mg/m ³ 5 mg/m ³	Total dust. Mist.
Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)	PEL	2000 mg/m ³ 500 ppm 5 mg/m ³	Mist.
Quartz (CAS 14808-60-7)	PEL	0.05 mg/m ³	Respirable dust.
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m ³	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.3 mg/m ³ 0.1 mg/m ³ 2.4 mppcf	Total dust. Respirable. Respirable.
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m ³ 15 mg/m ³ 50 mppcf 15 mppcf	Respirable fraction. Total dust. Total dust. Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm	
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m ³	Inhalable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m ³	
Calcium carbonate (CAS 1317-65-3)	TWA	5 ppm 5 mg/m ³	Respirable.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Ceiling	10 mg/m ³ 1800 mg/m ³	Total
	STEL	10 mg/m ³	Mist.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)	TWA	5 mg/m ³	Mist.
	Ceiling	1800 mg/m ³	
Quartz (CAS 14808-60-7)	STEL	10 mg/m ³	Mist.
	TWA	0.05 mg/m ³	Respirable dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

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

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

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

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Skin protection

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid paste.

Color White.

Odor Petroleum.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point	153.0 °F (67.2 °C)
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	Not available.
Vapor density	< 1
Relative density	1.7
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	30000 cP
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC	86 g/l 4.9% by weight

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	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Fluorine. Acids.
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	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
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Titanium dioxide (CAS 13463-67-7)

Acute

Inhalation

LC50

Rat

3.43 mg/l, 4 Hours

Components	Species	Test Results
Oral LD50	Rat	> 5000 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary 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	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)	
IARC Monographs. Overall Evaluation of Carcinogenicity		
2-Butoxyethanol (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.	
Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.	
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.	
NTP Report on Carcinogens		
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Known To Be Human Carcinogen.	
Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Quartz (CAS 14808-60-7)	Cancer	
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	May be harmful if absorbed through skin. Prolonged inhalation may be harmful.	
	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.	
	Prolonged exposure may cause chronic effects.	

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.	
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available.	
Partition coefficient n-octanol / water (log Kow)		
2-Butoxyethanol (CAS 111-76-2)	0.83	
Mobility in soil	No data available.	
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
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.

General information DOT: Not regulated as dangerous goods except when shipped in bulk. This material is not regulated if in a container of 119 gallon (450 L) capacity or less.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List. This product is not known to be 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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Quartz (CAS 14808-60-7)

Cancer
lung effects
immune system effects
kidney effects

CERCLA Hazardous Substance List (40 CFR 302.4)

2-Butoxyethanol (CAS 111-76-2)

LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-Butoxyethanol	111-76-2	1-5

Other federal regulations

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Quartz (CAS 14808-60-7)

Titanium dioxide (CAS 13463-67-7)

US. Massachusetts RTK - Substance List

2-Butoxyethanol (CAS 111-76-2)

Calcium carbonate (CAS 1317-65-3)
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)
Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)
Quartz (CAS 14808-60-7)
Titanium dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)
Calcium carbonate (CAS 1317-65-3)
Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)
Quartz (CAS 14808-60-7)
Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)
Calcium carbonate (CAS 1317-65-3)
Quartz (CAS 14808-60-7)
Titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Calcium carbonate (CAS 1317-65-3)
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)
Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)
Quartz (CAS 14808-60-7)
Titanium dioxide (CAS 13463-67-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies 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 05-February-2015
Revision date 26-April-2017
Version # 02
HMIS® ratings Health: 0
Flammability: 2
Physical hazard: 0

NFPA ratings



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