

JB590 - LIQUID CERAMIC PASTEL BASE



Date of compilation: 4/14/2023

Version: 1

SECTION 1: IDENTIFICATION

- 1.1 GHS Product identifier:** JB590 - LIQUID CERAMIC PASTEL BASE
Other means of identification:
Not applicable (N/A)
- 1.2 Recommended use of the chemical and restrictions on use:**
Relevant uses: Acrylic paint
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:**
Liquid Ceramic International, Inc.
4710 Belle-Oaks Dr
28217 Charlotte - North Carolina - United States
Phone: (704) 970-9519
info@liquidceramic.com
www.liquidceramic.com
- 1.4 Emergency phone number:**

SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
NFPA:
Health Hazards: 2
Flammability Hazards: 0
Instability Hazards: 0
Special Hazards: Not applicable (N/A)
29 CFR 1910.1200:
Classification of this product has been carried out in accordance with paragraph (d) of § 1910.1200.
Carc. 1B: Carcinogenicity, Category 1B, H350
Skin Sens. 1: Sensitisation, skin, Category 1, H317
- 2.2 Label elements:**
NFPA:

29 CFR 1910.1200:
Danger

- Hazard statements:**
Carc. 1B: H350 - May cause cancer.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
- Precautionary statements:**
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P501: Dispose of the contents/containers according to the local, state and federal regulations.
- Substances that contribute to the classification**
Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$); Quartz (1 % < RCS < 10%); diuron (ISO)
- Additional labeling:**

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SECTION 2: HAZARD(S) IDENTIFICATION (continued)



WARNING

This product can expose you to chemicals including Nepheline syenite, diuron (ISO), which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

2.3 Hazards not otherwise classified (HNOC):

Not applicable (N/A)

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: 7732-18-5	Water	25 - <50 %
CAS: Non-applicable	Acrylic polymer	10 - <25 %
CAS: 13463-67-7	Titanium dioxide (aerodynamic diameter ≤ 10 µm) Carc. 2: H351 - Warning	10 - <25 %
CAS: 1317-65-3	Limestone	10 - <25 %
CAS: 66402-68-4	Ceramic materials and wares, chemicals	2.5 - <10 %
CAS: 37244-96-5	Nepheline syenite	2.5 - <10 %
CAS: 57-55-6	Propane-1,2-diol	1 - <2.5 %
CAS: 25265-77-4	Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol	<1 %
CAS: 8031-18-3	Fuller's Earth Acute Tox. 4: H302 - Warning	<1 %
CAS: 60864-33-7	Benzyl-polyethylene glycol tert-octylphenyl ether Acute Tox. 4: H302 - Warning	<1 %
CAS: 9036-19-5	2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol Acute Tox. 4: H302; Eye Dam. 1: H318 - Danger	<1 %
CAS: 14808-60-7	Quartz (1 % < RCS < 10%) Carc. 1B: H350; STOT RE 2: H373 - Danger	<1 %
CAS: 55406-53-6	3-iodo-2-propynyl Butylcarbamate Acute Tox. 4: H302+H332; Eye Dam. 1: H318; Skin Sens. 1: H317; STOT SE 3: H335 - Danger	<1 %
CAS: 330-54-1	diuron (ISO) Acute Tox. 4: H302; Carc. 2: H351; STOT RE 2: H373 - Warning	<1 %

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

SECTION 4: FIRST-AID MEASURES

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SECTION 4: FIRST-AID MEASURES (continued)

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:

May cause an allergic skin reaction. In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

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:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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:

Not applicable (N/A)

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

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:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

Wear protective equipment. Keep unprotected persons away. See section 8.

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:

For accidental releases in excess of reportable quantities (RQ) (Table 302.4), refer to 40 CFR 302 for detailed instructions concerning reporting requirements and notify the National Response Center (800) 424-8802.

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.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

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

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

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.: 35.01 °F

Maximum Temp.: 100 °F

Maximum time: 24 Months

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:

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

Identification	Occupational exposure limits	
	8-hour TWA PEL	Ceiling Values - TWA PEL
Titanium dioxide (aerodynamic diameter ≤ 10 µm) CAS: 13463-67-7	15 mg/m ³	

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits	
	TLV-TWA	TLV-STEL
Titanium dioxide (aerodynamic diameter ≤ 10 µm) CAS: 13463-67-7	0.2 mg/m ³	
Limestone CAS: 1317-65-3	10 mg/m ³	20 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits	
Quartz (1 % < RCS < 10%) CAS: 14808-60-7	TLV-TWA	0.025 mg/m ³
	TLV-STEL	
diuron (ISO) CAS: 330-54-1	TLV-TWA	10 mg/m ³
	TLV-STEL	

CALIFORNIA- TABLE AC-1 PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS:


Identification	Occupational exposure limits	
Quartz (1 % < RCS < 10%) CAS: 14808-60-7	PEL	0.05 mg/m ³
	STEL	
diuron (ISO) CAS: 330-54-1	PEL	10 mg/m ³
	STEL	

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


Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR)

C.- Specific protection for the hands



Pictogram	PPE	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin. 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.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Face shield	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
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	Replace boots at any sign of deterioration. Use foot protection in accordance with manufacturer's use limitations and OSHA standard 1910.136 (29CFR)

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

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

40 CFR Part 59 (VOC):

V.O.C.(weight-percent):	1.45 % weight
V.O.C. at 68 °F:	64 kg/m ³ (64 g/L)

California Air Resources Board (CARB) - VOC Regulatory:

V.O.C.(weight-percent):	1.45 % weight
V.O.C. at 68 °F:	Not applicable (N/A)

South Coast Air Quality Management District (AQMD) - VOC Regulatory:

V.O.C.(weight-percent):	1.45 % weight
V.O.C. at 68 °F:	Not applicable (N/A)

Ozone Transport Commission (OTC) Rules - VOC Regulatory:

V.O.C.(weight-percent):	1.45 % weight
V.O.C. at 68 °F:	Not applicable (N/A)

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:	Viscous
Color:	According to the markings on the package
Odor:	Mild
Odour threshold:	Not applicable (N/A) *

Volatility:

Boiling point at atmospheric pressure:	218 °F
Vapour pressure at 68 °F:	Not applicable (N/A) *
Vapour pressure at 122 °F:	12245.21 Pa (12.25 kPa)
Evaporation rate at 68 °F:	Not applicable (N/A) *

Product description:

Density at 68 °F:	Not applicable (N/A) *
Relative density at 68 °F:	Not applicable (N/A) *
Dynamic viscosity at 68 °F:	Not applicable (N/A) *
Kinematic viscosity at 68 °F:	Not applicable (N/A) *
Kinematic viscosity at 104 °F:	>20.5 mm ² /s
Concentration:	Not applicable (N/A) *
pH:	8.6 - 9.4
Vapour density at 68 °F:	Not applicable (N/A) *

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

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Partition coefficient n-octanol/water 68 °F:	Not applicable (N/A) *
Solubility in water at 68 °F:	Not applicable (N/A) *
Solubility properties:	Not applicable (N/A) *
Decomposition temperature:	Not applicable (N/A) *
Melting point/freezing point:	Not applicable (N/A) *
Flammability:	
Flash Point:	Non Flammable (>199.4 °F)
Flammability (solid, gas):	Not applicable (N/A) *
Autoignition temperature:	739 °F
Lower flammability limit:	Not applicable (N/A) *
Upper flammability limit:	Not applicable (N/A) *
Particle characteristics:	
Median equivalent diameter:	Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Not applicable (N/A) *
Oxidising properties:	Not applicable (N/A) *
Corrosive to metals:	Not applicable (N/A) *
Heat of combustion:	Not applicable (N/A) *
Aerosols-total percentage (by mass) of flammable components:	Not applicable (N/A) *

Other safety characteristics:

Surface tension at 68 °F:	Not applicable (N/A) *
Refraction index:	Not applicable (N/A) *

*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 indicated 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	Not applicable	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	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 (CO₂), carbon monoxide and other organic compounds

SECTION 11: TOXICOLOGICAL INFORMATION

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

11.1 Information on toxicological effects:

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

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 : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

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

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

- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

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

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
IARC: Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (2B); Quartz (1 % < RCS < 10%) (1)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: 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 hazardous 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, however, it does contain substances which are classified as dangerous due to repetitive exposure. 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 hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

CAS 13463-67-7 Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$): The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) CAS: 13463-67-7	LD50 oral	10000 mg/kg	Rat
	LD50 dermal	10000 mg/kg	Rabbit
	LC50 inhalation	Not applicable (N/A)	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
	Route	Dose	
Limestone CAS: 1317-65-3	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal	Not applicable (N/A)	
	LC50 inhalation	Not applicable (N/A)	
3-iodo-2-propynyl Butylcarbamate CAS: 55406-53-6	LD50 oral	1100 mg/kg	Rat
	LD50 dermal	2100 mg/kg	Rabbit
	LC50 inhalation	3 mg/L (ATEi)	
Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol CAS: 25265-77-4	LD50 oral	6517 mg/kg	Rat
	LD50 dermal	15200 mg/kg	Rabbit
	LC50 inhalation	3.55 mg/L (6 h)	Rat
Benzyl-polyethylene glycol tert-octylphenyl ether CAS: 60864-33-7	LD50 oral	536 mg/kg	Rat
	LD50 dermal	Not applicable (N/A)	
	LC50 inhalation	Not applicable (N/A)	
diuron (ISO) CAS: 330-54-1	LD50 oral	1017 mg/kg	Rat
	LD50 dermal	Not applicable (N/A)	
	LC50 inhalation	Not applicable (N/A)	

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):

Acute toxicity:

Identification	Concentration		Species	Genus
	Route	Dose		
Propane-1,2-diol CAS: 57-55-6	LC50	51400 mg/L (96 h)	Pimephales promelas	Fish
	EC50	10000 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	19100 mg/L (336 h)	Selenastrum capricornutum	Algae
Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol CAS: 25265-77-4	LC50	30 mg/L (96 h)	Pimephales promelas	Fish
	EC50	95 mg/L (96 h)	Daphnia magna	Crustacean
	EC50	18.4 mg/L (72 h)	Selenastrum capricornutum	Algae
3-iodo-2-propynyl Butylcarbamate CAS: 55406-53-6	LC50	0.07 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	0.09 mg/L (96 h)	Mysidopsis bahia	Crustacean
	EC50	0.05 mg/L (72 h)	Scenedesmus subspicatus	Algae
diuron (ISO) CAS: 330-54-1	LC50	6.6 mg/L (96 h)	Leuciscus idus	Fish
	EC50	1.4 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	0.022 mg/L (96 h)	Scenedesmus subspicatus	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
	Route	Dose		
Propane-1,2-diol CAS: 57-55-6	NOEC	Not applicable (N/A)		
	NOEC	13020 mg/L	Ceriodaphnia sp.	Crustacean
3-iodo-2-propynyl Butylcarbamate CAS: 55406-53-6	NOEC	0.0084 mg/L	Pimephales promelas	Fish
	NOEC	0.0499 mg/L	Daphnia magna	Crustacean
diuron (ISO) CAS: 330-54-1	NOEC	0.001 mg/L	Danio rerio	Fish
	NOEC	0.56 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
	Parameter	Dose	Parameter	Dose
Propane-1,2-diol CAS: 57-55-6	BOD5	1.08 g O2/g	Concentration	100 mg/L
	COD	1.63 g O2/g	Period	28 days
	BOD5/COD	0.66	% Biodegradable	90 %

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Degradability		Biodegradability	
Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol CAS: 25265-77-4	BOD5	2.2 g O2/g	Concentration	Not applicable (N/A)
	COD	Not applicable (N/A)	Period	19 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	33 %
Benzyl-polyethylene glycol tert-octylphenyl ether CAS: 60864-33-7	BOD5	Not applicable (N/A)	Concentration	Not applicable (N/A)
	COD	Not applicable (N/A)	Period	28 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	8 %
2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol CAS: 9036-19-5	BOD5	Not applicable (N/A)	Concentration	100 mg/L
	COD	Not applicable (N/A)	Period	28 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	22 %
diuron (ISO) CAS: 330-54-1	BOD5	Not applicable (N/A)	Concentration	100 mg/L
	COD	Not applicable (N/A)	Period	28 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	0 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Propane-1,2-diol CAS: 57-55-6	BCF	1
	Pow Log	-0.92
	Potential	Low
Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol CAS: 25265-77-4	BCF	
	Pow Log	3.47
	Potential	
3-iodo-2-propynyl Butylcarbamate CAS: 55406-53-6	BCF	36
	Pow Log	2.4
	Potential	Moderate
diuron (ISO) CAS: 330-54-1	BCF	64
	Pow Log	2.68
	Potential	Moderate

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Propane-1,2-diol CAS: 57-55-6	Koc	Not applicable (N/A)	Henry	Not applicable (N/A)
	Conclusion	Not applicable (N/A)	Dry soil	Not applicable (N/A)
	Surface tension	3.547E-2 N/m (77 °F)	Moist soil	Not applicable (N/A)

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:

IT IS THE RESPONSIBILITY OF THE WASTE GENERATOR TO EVALUATE WHETHER HIS WASTES ARE HAZARDOUS BY CHARACTERISTICS OR LISTING.

Waste management (disposal and evaluation):

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

Follow RCRA framework and EPA regulation for to ensure that hazardous waste is managed safely and properly. Waste should not be disposed of to drains. Remind, It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristics or listing. See section 6 for further information about Accidental release measures.

Regulations related to waste management:

Legislation related to waste management:

40 CFR Solid Wastes - Part 239 through 282.

State regulatory requirements for generators may be more stringent than those in the federal program. Be sure to check the state's policies.

SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport.

SECTION 15: REGULATORY INFORMATION

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

- CALIFORNIA LABOR CODE - The Hazardous Substances List: *diuron (ISO) (330-54-1)*
 - California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Birth defects or other reproductive harm: Not applicable (N/A)
 - California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Cancer: *Nepheline syenite (37244-96-5); diuron (ISO) (330-54-1)*
 - CANADA-Domestic Substances List (DSL): *Water (7732-18-5); Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); Ceramic materials and wares, chemicals (66402-68-4); Nepheline syenite (37244-96-5); Propane-1,2-diol (57-55-6); Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol (25265-77-4); Fuller's Earth (8031-18-3); Benzyl-polyethylene glycol tert-octylphenyl ether (60864-33-7); 2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol (9036-19-5); Quartz (1 % < RCS < 10%) (14808-60-7); 3-iodo-2-propynyl Butylcarbamate (55406-53-6); diuron (ISO) (330-54-1)*
 - CANADA-Non-Domestic Substances List (NDSL): *Limestone (1317-65-3)*
 - Hazardous Air Pollutants (Clean Air Act): Not applicable (N/A)
 - Massachusetts RTK - Substance List: *Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); Limestone (1317-65-3); Nepheline syenite (37244-96-5); Quartz (1 % < RCS < 10%) (14808-60-7); 3-iodo-2-propynyl Butylcarbamate (55406-53-6); diuron (ISO) (330-54-1)*
 - Minnesota - Hazardous substances ERTK: *Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); Limestone (1317-65-3); Quartz (1 % < RCS < 10%) (14808-60-7); diuron (ISO) (330-54-1)*
 - New Jersey Worker and Community Right-to-Know Act: *Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); Limestone (1317-65-3); Propane-1,2-diol (57-55-6); Quartz (1 % < RCS < 10%) (14808-60-7); 3-iodo-2-propynyl Butylcarbamate (55406-53-6); diuron (ISO) (330-54-1)*
 - New York RTK - Substance list: *Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); diuron (ISO) (330-54-1)*
 - NTP (National Toxicology Program): *Nepheline syenite (37244-96-5); Quartz (1 % < RCS < 10%) (14808-60-7)*
 - OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): *Nepheline syenite (37244-96-5); Quartz (1 % < RCS < 10%) (14808-60-7)*
 - Pennsylvania Worker and Community Right-to-Know Law: *Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); Limestone (1317-65-3); Propane-1,2-diol (57-55-6); Quartz (1 % < RCS < 10%) (14808-60-7); diuron (ISO) (330-54-1)*
 - Rhode Island - Hazardous substances RTK: *diuron (ISO) (330-54-1)*
 - The Toxic Substances Control Act (TSCA) : *Water (7732-18-5); Titanium dioxide (aerodynamic diameter $\leq 10 \mu\text{m}$) (13463-67-7); Limestone (1317-65-3); Ceramic materials and wares, chemicals (66402-68-4); Propane-1,2-diol (57-55-6); Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol (25265-77-4); Fuller's Earth (8031-18-3); Benzyl-polyethylene glycol tert-octylphenyl ether (60864-33-7); 2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]ethoxy)ethanol (9036-19-5); Quartz (1 % < RCS < 10%) (14808-60-7); 3-iodo-2-propynyl Butylcarbamate (55406-53-6); diuron (ISO) (330-54-1)*
 - Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): *3-iodo-2-propynyl Butylcarbamate (55406-53-6); diuron (ISO) (330-54-1)*
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: diuron (ISO) (100 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:

Take into consideration other applicable federal, state, and local laws and local regulations.

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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:

H350: May cause cancer.

H317: May cause an allergic skin reaction.

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+H332 - Harmful if swallowed or if inhaled.

Carc. 1B: H350 - May cause cancer.

Carc. 2: H351 - Suspected of causing cancer (Inhalation).

Carc. 2: H351 - Suspected of causing cancer.

Eye Dam. 1: H318 - Causes serious eye damage.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation).

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

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

IARC: International Agency for Research on Cancer

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END OF SAFETY DATA SHEET

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