BELZONA® 1812 - CERAMIC CARBIDE FP (SOLIDIFIER)

Date of compilation: 7/9/2024 Version: 1

SECTION 1: IDENTIFICATION

1.1 GHS Product identifier: BELZONA® 1812 - CERAMIC CARBIDE FP (SOLIDIFIER)

Other means of identification:

SN3004

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Ceramic coating. For industrial user only.

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:

Belzona, Inc.
14300 NW 60th Avenue
33014 Miami Lakes - Florida - United States
Phone: +1 305 594 4994
sds@belzona.com
www.belzona.com

1.4 Emergency phone number: VelocityEHS (24/7/365):
1-800-255-3924 [US, CANADA, PUERTO RICO & THE U.S. VIRGIN ISLANDS]
1-813-248-0585 [INTERNATIONAL]

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture:

NFPA:

Health Hazards: 3
Flammability Hazards: 1
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.

Eye Dam. 1: Serious eye damage, Category 1, H318
Skin Corr. 1B: Skin corrosion, Category 1B, H314
Skin Sens. 1B: Sensitisation, skin, Category 1B, H317

2.2 Label elements:

NFPA:

29 CFR 1910.1200:

Danger

Hazard statements:

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Sens. 1B: H317 - May cause an allergic skin reaction.

Precautionary statements:

P260: Do not breathe vapors.
P280: Wear protective gloves/protective clothing/eye protection.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a poison center/doctor.
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

2.3 Hazards not otherwise classified (HNOC):

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SECTION 2: HAZARD(S) IDENTIFICATION (continued)

Not applicable (N/A)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Non-applicable

3.2 Mixtures:

Chemical description: Formulated polyamines

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	Concentration
CAS: 111-40-0	**2,2´-iminodiethylamine**	**5 - <10 %**
CAS: 100-51-6	**benzyl alcohol**	**5 - <10 %**
CAS: 1477-55-0	**m-phenylenebis(methylamine)**	**1 - <5 %**
CAS: 25513-64-8	**2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine**	**1 - <5 %**

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

2,2'-IMINODIETHYLAMINE (DIETHYLENETRIAMINE) [111-40-0] IS TOXIC BY INHALATION (H330) WHEN AEROSOLIZED OR SPRAYED. HOWEVER, THE CHEMICAL VAPORS SHOW NO SIGN OF TOXICITY. IF THE PRODUCT IS NOT AEROSOLIZED OR SPRAYED, INHALATION TOXICITY DOES NOT APPLY WHEN CALCULATING THE TOXICITY OF THE FINISHED PRODUCT.

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:

Request medical assistance immediately, 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:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

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:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and its inhalation, to the respiratory system. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Keep the person affected at rest.

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:

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SECTION 4: FIRST-AID MEASURES (continued)

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:

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

For emergency responders:

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 reportables 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.

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

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

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

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

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SECTION 7: HANDLING AND STORAGE (continued)

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.- Specific storage requirements

Minimum Temp.: 41 ºF

Maximum Temp.: 86 ºF

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		
Diiron trioxide	8-hour TWA PEL		10 mg/m³
CAS: 1309-37-1	Ceiling Values - TWA PEL		

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits		
2,2´-iminodiethylamine	TLV-TWA	1 ppm	
CAS: 111-40-0	TLV-STEL		
Diiron trioxide	TLV-TWA		5 mg/m³
CAS: 1309-37-1	TLV-STEL		

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

Identification	Occupational exposure limits		
m-phenylenebis(methylamine)	PEL		0.1 mg/m³
CAS: 1477-55-0	STEL		0.1 mg/m³
2,2´-iminodiethylamine	PEL	1 ppm	4 mg/m³
CAS: 111-40-0	STEL		
Diiron trioxide	PEL		5 mg/m³
CAS: 1309-37-1	STEL		

Nuisance dust: Inhalable dust 10 mg/m3 // Respirable dust 4 mg/m3

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

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Chloroprene, Breakthrough time: > 480 min, Thickness: 0.65 mm)	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)

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): 17.2 % weight

V.O.C. at 68 ºF: Not applicable (N/A)

California Air Resources Board (CARB) - VOC Regulatory:

V.O.C.(weight-percent): 17.2 % weight

V.O.C. at 68 ºF: Not applicable (N/A)

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

V.O.C.(weight-percent): 17.2 % weight

V.O.C. at 68 ºF: Not applicable (N/A)

Ozone Transport Commission (OTC) Rules - VOC Regulatory:

V.O.C.(weight-percent): 17.2 % weight

V.O.C. at 68 ºF: Not applicable (N/A)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

*Not applicable (N/A) 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)

For complete information see the product datasheet.

Appearance:

Physical state at 68 ºF:	Solid
Appearance:	Paste
Color:	Red
Odor:	Aminic
Odour threshold:	Not applicable (N/A) *

Volatility:

Boiling point at atmospheric pressure:	>212 ºF
Vapour pressure at 68 ºF:	Not applicable (N/A) *
Vapour pressure at 122 ºF:	Not applicable (N/A) *
Evaporation rate at 68 ºF:	Not applicable (N/A) *

Product description:

Density at 68 ºF:	Not applicable (N/A) *
Relative density at 68 ºF:	1.9 - 2.1
Dynamic viscosity at 68 ºF:	Not applicable (N/A) *
Kinematic viscosity at 68 ºF:	Not applicable (N/A) *
Kinematic viscosity at 104 ºF:	>20.5 mm²/s
Concentration:	Not applicable (N/A) *
pH:	Not applicable (N/A) *
Vapour density at 68 ºF:	Not applicable (N/A) *
Partition coefficient n-octanol/water 68 ºF:	Not applicable (N/A) *
Solubility in water at 68 ºF:	Not applicable (N/A) *
Solubility properties:	Soluble
Decomposition temperature:	Not applicable (N/A) *
Melting point/freezing point:	Not applicable (N/A) *

Flammability:

Flash Point:	>234 ºF
Flammability (solid, gas):	Not applicable (N/A) *
Autoignition temperature:	Not applicable (N/A) *
Lower flammability limit:	Not applicable (N/A) *
Upper flammability limit:	Not applicable (N/A) *

Explosive (Solid):

Lower explosive limit:	Not applicable (N/A) *
Upper explosive limit:	Not applicable (N/A) *

Particle characteristics:

Median equivalent diameter:	Not applicable (N/A) *

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) *

*Not applicable (N/A) 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)

Other safety characteristics:

Surface tension at 68 ºF:	Not applicable (N/A) *
Refraction index:	Not applicable (N/A) *
Total lead:	0 ppm

*Not applicable (N/A) 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 from Safety Data Sheet.

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	Precaution	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

Contains substances which require external energy for spontaneous decomposition. Form explosive peroxides when distilled, evaporated or otherwise concentrated.

SECTION 11: TOXICOLOGICAL INFORMATION

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: Corrosive product, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

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: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

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

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious eye damage after contact.

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

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
  IARC: Diiron trioxide (3)
- 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, as it does not contain substances classified as hazardous for this effect. 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:

Not applicable (N/A)

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
benzyl alcohol CAS: 100-51-6	LD50 oral	500 mg/kg (ATEi)	Rat
	LD50 dermal	2500 mg/kg	
	LC50 inhalation	1.5 mg/L (ATEi)	
m-phenylenebis(methylamine) CAS: 1477-55-0	LD50 oral	1090 mg/kg (ATEi)	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	1.5 mg/L (ATEi)	
2,2´-iminodiethylamine CAS: 111-40-0	LD50 oral	1620 mg/kg (ATEi)	Rat
	LD50 dermal	1045 mg/kg (ATEi)	Rabbit
	LC50 inhalation	0.05 mg/L (ATEi)	
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine CAS: 25513-64-8	LD50 oral	910 mg/kg (ATEi)	Rat
	LD50 dermal	>5000 mg/kg	
	LC50 inhalation	>20 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

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

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.

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Acute toxicity:

Identification	Concentration		Species	Genus
2,2´-iminodiethylamine CAS: 111-40-0	LC50	430 mg/L (96 h)	Poecilia reticulata	Fish
	EC50	16 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	187 mg/L (72 h)	Selenastrum capricornutum	Algae
benzyl alcohol CAS: 100-51-6	LC50	646 mg/L (48 h)	Leuciscus idus	Fish
	EC50	400 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	79 mg/L (3 h)	Scenedesmus subspicatus	Algae

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
m-phenylenebis(methylamine)	LC50	88 mg/L (96 h)	Oryzias latipes	Fish
CAS: 1477-55-0	EC50	15 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	20 mg/L (72 h)	Selenastrum capricornutum	Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
2,2´-iminodiethylamine	NOEC	10 mg/L	Gasterosteus aculeatus	Fish
CAS: 111-40-0	NOEC	5.6 mg/L	Daphnia magna	Crustacean
benzyl alcohol	NOEC	48.897 mg/L	N/A	Fish
CAS: 100-51-6	NOEC	51 mg/L	Daphnia magna	Crustacean
m-phenylenebis(methylamine)	NOEC	Not applicable (N/A)		
CAS: 1477-55-0	NOEC	4.7 mg/L	Daphnia magna	Crustacean
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	NOEC	10.9 mg/L	Danio rerio	Fish
CAS: 25513-64-8	NOEC	1.02 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability		Biodegradability	
2,2´-iminodiethylamine	BOD5	Not applicable (N/A)	Concentration	10 mg/L
CAS: 111-40-0	COD	Not applicable (N/A)	Period	21 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	87 %
benzyl alcohol	BOD5	Not applicable (N/A)	Concentration	100 mg/L
CAS: 100-51-6	COD	Not applicable (N/A)	Period	14 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	94 %
m-phenylenebis(methylamine)	BOD5	Not applicable (N/A)	Concentration	14 mg/L
CAS: 1477-55-0	COD	Not applicable (N/A)	Period	28 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	49 %
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	BOD5	Not applicable (N/A)	Concentration	10 mg/L
CAS: 25513-64-8	COD	Not applicable (N/A)	Period	28 days
	BOD5/COD	Not applicable (N/A)	% Biodegradable	7 %

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
2,2´-iminodiethylamine	BCF	2
CAS: 111-40-0	Pow Log	-1.3
	Potential	Low
benzyl alcohol	BCF	0
CAS: 100-51-6	Pow Log	1.1
	Potential	Low
m-phenylenebis(methylamine)	BCF	3
CAS: 1477-55-0	Pow Log	0.18
	Potential	Low

12.4 Mobility in soil:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
2,2´-iminodiethylamine	Koc	Not applicable (N/A)	Henry	Not applicable (N/A)
CAS: 111-40-0	Conclusion	Not applicable (N/A)	Dry soil	Not applicable (N/A)
	Surface tension	4.164E-2 N/m (77 ºF)	Moist soil	Not applicable (N/A)
benzyl alcohol	Koc	Not applicable (N/A)	Henry	Not applicable (N/A)
CAS: 100-51-6	Conclusion	Not applicable (N/A)	Dry soil	Not applicable (N/A)
	Surface tension	3.679E-2 N/m (77 ºF)	Moist soil	Not applicable (N/A)
m-phenylenebis(methylamine)	Koc	1300	Henry	Not applicable (N/A)
CAS: 1477-55-0	Conclusion	Low	Dry soil	Not applicable (N/A)
	Surface tension	Not applicable (N/A)	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:

The next characteristic per RCRA could apply to the unused product if it becomes a waste material: Corrosivity. The next EPA hazardous waste number could apply: D002.
IT IS THE RESPONSIBILITY OF THE WASTE GENERATOR TO EVALUATE WHETHER HIS WASTES ARE HAZARDOUS BY CHARACTERISTICS OR LISTING.

Waste management (disposal and evaluation):

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

Other information:

Labeling and packaging requirements may vary with pack and load size. Please refer to the current transport regulations.

Transport of dangerous goods by land:

With regard to 49 CFR on the Transport of Dangerous Goods:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number: UN3259

14.2 UN proper shipping name: AMINES, SOLID, CORROSIVE, N.O.S. (2,2´-iminodiethylamine; Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine))

14.3 Transport hazard class(es): 8

Labels: 8

14.4 Packing group, if applicable: II

14.5 Marine pollutant: Yes

14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Physico-Chemical properties: see section 9

Limited quantities: 1 kg

Under 49 CFR 171.4, Except when transporting aboard a vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars, and aircraft

14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable (N/A)

Transport of dangerous goods by sea:

With regard to IMDG 41-22:

14.1 UN number: UN3259

14.2 UN proper shipping name: AMINES, SOLID, CORROSIVE, N.O.S. (2,2´-iminodiethylamine; Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine))

14.3 Transport hazard class(es): 8

Labels: 8

14.4 Packing group, if applicable: II

14.5 Marine pollutant: Yes

14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Special regulations: 274

EmS Codes: F-A, S-B

Physico-Chemical properties: see section 9

Limited quantities: 1 kg

Segregation group: SGG18

14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable (N/A)

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:

14.1 UN number: UN3259

14.2 UN proper shipping name: AMINES, SOLID, CORROSIVE, N.O.S. (2,2´-iminodiethylamine; Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine))

14.3 Transport hazard class(es): 8

Labels: 8

14.4 Packing group, if applicable: II

14.5 Marine pollutant: Yes

14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Physico-Chemical properties: see section 9

14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable (N/A)

SECTION 15: REGULATORY INFORMATION

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SECTION 15: REGULATORY INFORMATION (continued)

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

- CALIFORNIA LABOR CODE - The Hazardous Substances List: *2,2´-iminodiethylamine (111-40-0)* ; *m-phenylenebis(methylamine) (1477-55-0)*
- 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: Not applicable (N/A)
- CANADA-Domestic Substances List (DSL): *2,2´-iminodiethylamine (111-40-0)* ; *benzyl alcohol (100-51-6)* ; *m-phenylenebis(methylamine) (1477-55-0)* ; *2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine (25513-64-8)*
- CANADA-Non-Domestic Substances List (NDSL): Not applicable (N/A)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: Not applicable (N/A)
- Hazardous Air Pollutants (Clean Air Act): Not applicable (N/A)
- Massachusetts RTK - Substance List: *2,2´-iminodiethylamine (111-40-0)* ; *benzyl alcohol (100-51-6)* ; *m-phenylenebis(methylamine) (1477-55-0)*
- Minnesota - Hazardous substances ERTK: *2,2´-iminodiethylamine (111-40-0)* ; *m-phenylenebis(methylamine) (1477-55-0)*
- New Jersey Worker and Community Right-to-Know Act: *2,2´-iminodiethylamine (111-40-0)* ; *m-phenylenebis(methylamine) (1477-55-0)*
- New York RTK - Substance list: *2,2´-iminodiethylamine (111-40-0)* ; *m-phenylenebis(methylamine) (1477-55-0)*
- NTP (National Toxicology Program): Not applicable (N/A)
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Not applicable (N/A)
- Pennsylvania Worker and Community Right-to-Know Law: *2,2´-iminodiethylamine (111-40-0)* ; *benzyl alcohol (100-51-6)* ; *m-phenylenebis(methylamine) (1477-55-0)*
- Rhode Island - Hazardous substances RTK: Not applicable (N/A)
- The Toxic Substances Control Act (TSCA) : *2,2´-iminodiethylamine (111-40-0)* ; *benzyl alcohol (100-51-6)* ; *m-phenylenebis(methylamine) (1477-55-0)* ; *2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine (25513-64-8)*
- Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): Not applicable (N/A)

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information provided in this safety data sheet as a foundation for conducting workplace-specific risk assessments. These assessments will help establish the appropriate risk prevention measures for handling, using, storing, and disposing of this product.

Other legislation:

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

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:

H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.

Advice related to training:

According to 29 CFR 1910. 1200, training on chemical hazards is necessary for employees using this product. This training will facilitate their understanding and interpretation of the safety data sheet, as well as the product label.

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

Date of compilation: 7/9/2024

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Manufacturer Disclaimer: The information contained in this safety date sheet ("SDS") is based on sources, technical knowledge and current legislation. Furthermore, is based on data believed to be accurate; thus, the company does not assume any liability for its accuracy. The information provided herein cannot be considered a guarantee of the properties of this product and the same is simply a description of the security requirements. The use, occupational methodology and/or conditions for users of this product are not within our awareness or control. It is ultimately the responsibility of the user(s) to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information of this SDS only refers to this product, which should not be used for purposes other than those specified. Finally, the manner in which this product is used and whether there is any infringement of patents is the sole responsibility of the user(s).

END OF SAFETY DATA SHEET