

SAFETY DATA SHEET

OR-CAL DUO

Section 1. Identification

GHS product identifier	: OR-CAL DUO
Other means of identification	: Not available.
Product code	: EPA Registration Number: 71096-20
Product use	: Pesticide. Molluscicides.
Supplier's details	: OR-CAL Inc. 29454 Meadowview Rd. Junction City, OR 97448 541-689-4413 (Office) 541-689-5026 (FAX) www.orcalinc.com EPA Establishment No. 66876-OR-001
e-mail address of person responsible for this SDS	: chelsea@orcalinc.com
Emergency telephone number (with hours of operation)	: CHEMTREC: 1-800-424-9300 (US and Canada) National Pesticide Information Center: 1-800-858-7378 American Association of Poison Control Centers: 1-800-222-1222

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2B

GHS label elements

Hazard pictograms

:

**Signal word**

: Warning

Hazard statements: Harmful if swallowed, in contact with skin or if inhaled.
Causes eye irritation.**Precautionary statements****Prevention**

: Wear protective gloves and protective clothing. Use only outdoors or in a well-ventilated area. Avoid breathing dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage

: Not applicable.

Section 2. Hazards identification

Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.
Product code	: EPA Registration Number: 71096-20

Ingredient name	Synonyms	%	Identifiers
Proprietary		≥15 - ≤40	-
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	metaldehyde (ISO); metaldehyde; 1,3,5,7-Tetroxocane, 2,4,6,8-tetramethyl-; Acetaldehyde, tetramer; Metaldehyde (2,4,6,8-tetramethyl-1,3,5,7-Tetroxocane); 2,4,6,8-Tetramethyl-1,3,5,7-tetroxocane; 2,4,6,8-tetramethyl-1,3,5,7-tetraoxocane; Metaldehyde (tetramer); Tetraacetaldehyde; Ariotox; Slug-tox	≥1 - ≤5	CAS: 108-62-3
sodium benzoate	Benzoic acid, sodium salt; E 211; sodium phenylcarboxylate; sodium benzenecarboxylate; Ethoxylated C12-20 fatty acids; SODIUM BENZOIC ACID; Benzoate of soda	≥0.5 - ≤1.5	CAS: 532-32-1
sulfur	Sulfur, excluding formed sulfur; Sulphur; sulfur, precipitated, sublimed or colloidal; sulfur, other than precipitated, sublimed or colloidal; COLLOIDAL SULFUR; Sulfur and gum arabic; Brimstone; Flour sulfur; Flowers of sulfur; Planisan; Sulphur fa	≥0.1 - ≤1	CAS: 7704-34-9
crystalline silica, respirable powder	alpha-quartz; Silica, crystalline (quartz); Silica, Crystalline Quartz; SILICA, CRYSTALLINE, QUARTZ; Silica-Crystalline, Quartz; Silica - Crystalline Quartz; Silica-Crystalline : Quartz; Silica, crystalline - quartz	<0.1	CAS: 14808-60-7
Formaldehyde, solution	formaldehyde; Formalin; Formic aldehyde; Methaldehyde; Methanal; Oxomethane; Oxymethylene; Formaldehyde solution; Methylene oxide; Methyl aldehyde	<0.1	CAS: 50-00-0

Section 3. Composition/information on ingredients

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Harmful in contact with skin.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Proprietary	None.
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	None.
sodium benzoate	ACGIH TLV (United States, 1/2025) A5. Absorbed through skin. TWA 8 hours: 2.5 mg/m ³ (as benzoate). Form: Inhalable fraction.
sulfur	None.
crystalline silica, respirable powder	NIOSH REL (United States, 10/2020) [SILICA, CRYSTALLINE] NIA. TWA 10 hours: 0.05 mg/m ³ . Form: respirable dust. CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 0.05 mg/m ³ . OSHA PEL Z3 (United States, 6/2016) TWA 8 hours: 250 / (%SiO ₂ +5) mppcf. Form: Respirable. TWA 8 hours: 10 / (%SiO ₂ +2) mg/m ³ . Form: Respirable. OSHA PEL (United States, 5/2018) [Silica, crystalline] TWA 8 hours: 50 µg/m ³ . Form: Respirable dust. OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 0.1 mg/m ³ (as quartz). Form: Respirable dust. ACGIH TLV (United States, 1/2025) [Silica, crystalline] A2. TWA 8 hours: 0.025 mg/m ³ . Form: Respirable fraction.

Section 8. Exposure controls/personal protection

Formaldehyde, solution

NIOSH REL (United States, 10/2020) NIA.
TWA 10 hours: 0.016 ppm.
CEIL 15 minutes: 0.1 ppm.

OSHA PEL Z2 (United States, 2/2013)
TWA 8 hours: 0.75 ppm.
STEL 15 minutes: 2 ppm.

CAL OSHA PEL (United States, 1/2025)
STEL 15 minutes: 2 ppm.
TWA 8 hours: 0.75 ppm.

OSHA PEL (United States, 5/2018)
TWA 8 hours: 0.75 ppm.
STEL 15 minutes: 2 ppm.

OSHA PEL 1989 (United States, 3/1989)
TWA 8 hours: 0.75 ppm.
STEL 15 minutes: 2 ppm.

ACGIH TLV (United States, 1/2025) A1. Skin sensitizer , Inhalation sensitizer.
STEL 15 minutes: 0.3 ppm.
TWA 8 hours: 0.1 ppm.

Biological exposure indices

None known.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride ≥14 mils, or viton ≥14 mils.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
Recommended: Ensure an MSHA/NIOSH-approved respirator or equivalent is used.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Solid.
Color : Not available.
Odor : Not available.
Odor threshold : Not available.
pH : Not available.
Melting point/freezing point : Not available.
Boiling point or initial boiling point and boiling range : Not available.
Flash point : Not applicable.
Evaporation rate : Not available.
Flammability : Not available.
Lower and upper explosion limit/flammability limit : Not applicable.
Vapor pressure : Not available.
Relative vapor density : Not applicable.
Relative density : Not available.
Solubility in water : Not available.
Partition coefficient: n-octanol/water : Not applicable.
Auto-ignition temperature : Not applicable.
Decomposition temperature : Not available.
Viscosity : Dynamic (room temperature): Not available.
 Kinematic (room temperature): Not available.
 Kinematic (40°C (104°F)): Not available.
Explosive properties : Not available.
Oxidizing properties : Not available.
Particle characteristics
Median particle size : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Keep away from heat, sparks and flame.
- Incompatible materials** : Reactive or incompatible with the following materials: Oxidizing materials.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result and Species	Dose [Exposure]	Remarks
2,4,6,8-tetramethyl- 1,3,5,7-tetraoxacyclooctane sulfur	Oral - Rat - Male, Female - LD50 [OECD 401]	283 mg/kg	-
	Dermal - Rat - LD50	>5000 mg/kg	-
	Dermal - Rat - LD50	>2000 mg/kg	-
	Oral - Rat - LD50	>2200 mg/kg	-
Formaldehyde, solution	Oral - Rat - LD50	100 mg/kg	-
	Dermal - Rabbit - LD50	270 ul/kg	-

Conclusion/Summary : Harmful if swallowed, in contact with skin or if inhaled.

Irritation/Corrosion

Product/ingredient name	Result and Species	Exposure	Remarks
2,4,6,8-tetramethyl- 1,3,5,7-tetraoxacyclooctane	Skin - Rabbit - Non-irritating to the skin. - [OECD 404]	Duration of treatment/ exposure: 4 hours	-
	Eyes - Rabbit - Slight irritant - [OECD 405]	-	-
sodium benzoate	Skin - Rabbit - Not irritant	-	-
	Eyes - Rabbit - Not irritant	-	-
Formaldehyde, solution	Eyes - Rabbit - Severe irritant	-	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Causes eye irritation.

Respiratory : Not available.

Respiratory or skin sensitization

Product/ingredient name	Route of exposure and Species	Result	Remarks
2,4,6,8-tetramethyl- 1,3,5,7-tetraoxacyclooctane	skin - Mouse [Skin Sensitization: Local Lymph Node Assay]	Not sensitizing	-
	skin - Guinea pig [Test type: Buehler Test]	Not sensitizing	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Not available.

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Result	Experiment	Remarks
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	Negative [OECD 471 [Test type: Ames Test]]	In vitro - S. typhimurium	-
	Negative [OECD 476 [Test type: gene mutation assay]]	In vitro - mouse lymphoma cells	-
	Negative [OECD 473 [Test type: Chromosome aberration test In vitro]]	In vitro - Hamster	-
	Negative [OECD 474 [Test type: In vivo Micronucleus-test]]	In vivo - Mouse	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Product/ingredient name	Result	Species and Route of exposure	Dose [Exposure]	Remarks
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	Negative [OECD 451]	Mouse - Oral -	-	-
	Negative [OECD 453]	Rat - Oral -	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Classification

Product/ingredient name	OSHA	IARC	NTP
crystalline silica, respirable powder	+	1	Known to be a human carcinogen.
Formaldehyde, solution	+	1	Known to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Proprietary	Category 3	-	Respiratory tract irritation
Formaldehyde, solution	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Proprietary	Category 2	inhalation	-
crystalline silica, respirable powder	Category 1	inhalation	lungs

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes eye irritation.
Inhalation : Harmful if inhaled.
Skin contact : Harmful in contact with skin.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 irritation
 watering
 redness
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result and Species	Dose [Exposure]	Remarks
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	Dermal - Chronic - Rabbit - NOAEL [Method: US EPA]	>1000 mg/kg [5 days per week] [21 days]	-

Conclusion/Summary : Based on available data, the classification criteria are not met.
General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
DUO	500	1100	N/A	11	N/A
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	283	N/A	N/A	N/A	N/A
Formaldehyde, solution	500	N/A	100	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result [Exposure]	Species	Remarks
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	Acute - LC50 75 mg/l [96 hours] [OECD 203]	Fish - Trout - <i>Oncorhynchus mykiss</i>	-
	Chronic - NOEC >25 mg/l [35 days] [OECD 210]	Fish - <i>Danio rerio</i>	-
	Acute - EC50 >100 mg/l [48 hours] [OECD 202]	Daphnia - <i>Daphnia magna</i>	-
	Chronic - NOEC >98 mg/l [21 days] [OECD 211]	Daphnia - <i>Daphnia magna</i>	-
	Acute - EC50 >200 mg/l [72 hours] [OECD 201]	Algae - <i>Desmodesmus subspicatus</i>	-
	Chronic - NOEC >25 mg/l [33 days] [OECD 210]	Fish - <i>Danio rerio</i>	-
Formaldehyde, solution	Acute - EC50 >1000 mg/l [3 hours] [OECD 209]	Activated sludge	-
	Acute - LC50 24.1 mg/l [96 hours]	Fish - <i>Fathead minnow</i>	-
	Acute - LC50 0.1 mg/l [96 hours]	Fish - <i>Bluegill</i>	-
	Acute - EC50 20 mg/l [96 hours]	Crustaceans - <i>water flea</i>	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Persistence and degradability

Product/ingredient name	Test	Result	Remarks
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	OECD 301F	2.8% [28 days] - Not readily	-
	OECD 302B	6% [28 days] - Not readily	-

Conclusion/Summary : There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	>360 days [Fresh water] [pH 5 to 9] [25 °C] Method: EPA-FIFRA	-	Not readily
Formaldehyde, solution	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
2,4,6,8-tetramethyl-1,3,5,7-tetraoxacyclooctane	<1	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Mobility : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Pesticide Disposal: To avoid waste, use all material in this container by application according to label directions. If waste cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments).

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Label						
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	Marine Pollutant: No	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not intended.

Section 15. Regulatory information

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of nonpesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION: Harmful if swallowed. Harmful if inhaled. Causes moderate eye irritation. Harmful if absorbed through the skin. Avoid contact with eyes, skin, or clothing. Avoid breathing dust. **IMPORTANT:** This product can be harmful to children and fatal to domestic animals when ingested. Children and dogs may be attracted to the product. Application of this product is prohibited unless children and domestic animals can be excluded from the treated area from start of the application until applied material is no longer visible.

EPA Registration Number: 71096-20

Clean Water Act (CWA) 311: Formaldehyde, solution

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Formaldehyde, solution	≤0.1	Yes.	500	-	100	-

SARA 304 RQ : 732286.9 lbs / 332458.3 kg

SARA 311/312

Classification : ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
EYE IRRITATION - Category 2B

Composition/information on ingredients

Name	%	Classification
Proprietary	≥15 - ≤40	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
2,4,6,8-tetramethyl-	≥1 - ≤5	FLAMMABLE SOLIDS - Category 2

Section 15. Regulatory information

1,3,5,7-tetraoxacyclooctane		ACUTE TOXICITY (oral) - Category 3
sodium benzoate	≥0.5 - ≤1.5	COMBUSTIBLE DUSTS EYE IRRITATION - Category 2A
sulfur	≥0.1 - ≤1	FLAMMABLE SOLIDS - Category 2 COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B
crystalline silica, respirable powder	≤0.1	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
Formaldehyde, solution	≤0.1	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

State regulations

Massachusetts	: The following components are listed: METALDEHYDE
New York	: None of the components are listed.
New Jersey	: The following components are listed: METALDEHYDE
Pennsylvania	: The following components are listed: 1,3,5,7-TETROXOCANE, 2,4,6,8-TETRAMETHYL-
California Prop. 65	

⚠ WARNING: This product can expose you to chemicals including Silica, crystalline and Formaldehyde, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Silica, crystalline	-	-
Formaldehyde	Yes.	-

EPA PFAS Compilation from Comptox

Not listed.

TSCA 8(a)7 - One-time Reporting PFAS

Not listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 15. Regulatory information

OECD Comprehensive Global PFAS Database

Not listed.

Section 16. Other information

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Regulatory data
ACUTE TOXICITY (dermal) - Category 4	Regulatory data
ACUTE TOXICITY (inhalation) - Category 4	Regulatory data
EYE IRRITATION - Category 2B	Regulatory data

History

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Key to abbreviations : ADR = Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 DOT = Department of Transportation
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 SGG = Segregation Group
 TDG = Transportation of Dangerous Goods
 UN = United Nations

References : Not available.

🔵 Indicates information that has changed from previously issued version.

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