

SAFETY DATA SHEET

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Trade name : CuLator Metal Eliminator, Metal XTract, CuLator Ultra 4.0

Use : Metal Chelating Agent, Metal Sequestering Agent

Company : Periodic Products, Inc.
1885 W State Road 84
Suite 104
Fort Lauderdale, FL 33315

Emergency telephone:

Health:

866.442.9628 (North America)

1.832.813.4984 (International)

Transport:

North America: CHEMTREC 800.424.9300 or 703.527.3887

Asia: +800 CHEMCALL (+800 2436 2255)

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety
E-mail address : info@periodicproducts.com
Website : www.periodicproducts.com

SECTION 2: Hazards identification

Emergency Overview

Form: Powder **Physical state:** Solid **Color:** white to yellow

OSHA Hazards : This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

GHS-Labeling

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

Carcinogenicity:**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3: Composition/information on ingredients

Synonyms : Poly-octadecylbutanedioate
2,5-Furandione, polymer with 1-
octadecene, sodium salt

Molecular formula : $(C_{18}H_{36}-C_4H_2O_4Na_2)_x$

Contains no hazardous ingredients according to GHS.

Component	CAS-No.	Weight %
Poly-octadecylbutanedioate	110707-31-8	100

SECTION 4: First aid measures

General advice : Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5: Firefighting measures

Flash point : No data available

Autoignition temperature : Not applicable

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for fire fighting if necessary.

Culator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

- Further information : Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Fire and explosion protection : Provide appropriate exhaust ventilation at places where dust is formed.
- Hazardous decomposition products : Carbon oxides.

SECTION 6: Accidental release measures

- Personal precautions : Avoid dust formation.
- Methods for cleaning up : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Handling**

- Advice on safe handling : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.

Storage

- Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.
- Advice on common storage : No materials to be especially mentioned.

SECTION 8: Exposure controls/personal protection**Engineering measures**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

- Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.
- Hand protection : No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

practices, precautions should be taken to avoid skin contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection	:	Safety glasses.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Lightweight protective clothing.
Hygiene measures	:	General industrial hygiene practice.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

Form	:	Powder
Physical state	:	Solid
Color	:	white to yellow

Safety data

Flash point	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available

Oxidizing properties	:	no
Autoignition temperature	:	Not applicable
Molecular formula	:	(C ₁₈ H ₃₆ -C ₄ H ₂ O ₄ Na ₂) _x
Molecular Weight	:	No data available
pH	:	Not applicable
Freezing point	:	No data available
Pour point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	Not applicable
Relative density	:	0.97, 15.6 °C(60.1 °F)
Water solubility	:	Insoluble in hydrocarbon solvents and water.
Partition coefficient: n-octanol/water	:	not applicable
Viscosity, dynamic	:	2,500 cP
Relative vapor density	:	Not applicable

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

Evaporation rate : Not applicable

Percent volatile : < 1 %

SECTION 10: Stability and reactivity

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions

Conditions to avoid : No data available.

Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Other data : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Keep in a dry place. No decomposition if stored and applied as directed.**SECTION 11: Toxicological information****Acute oral toxicity**2,5-Furandione, polymer with 1-octadecene, sodium salt : LD50: > 8,000 mg/kg
Species: rat**Acute inhalation toxicity**

2,5-Furandione, polymer with 1-octadecene, sodium salt : No data available

Acute dermal toxicity2,5-Furandione, polymer with 1-octadecene, sodium salt : LD50: > 2,000 mg/kg
Species: rat
Method: OECD Test Guideline 402**Skin irritation**

2,5-Furandione, polymer with 1-octadecene, sodium salt : No skin irritation

Eye irritation

2,5-Furandione, polymer with 1-octadecene, sodium salt : No eye irritation

Repeated dose toxicity2,5-Furandione, polymer with 1-octadecene, sodium salt : Species: rat
Application Route: oral gavage

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

Dose: 0, 100, 500, 1000 mg/kg
 Exposure time: 4 wk
 Number of exposures: daily
 NOEL: > 1,000 mg/kg

Species: rat
 Application Route: oral gavage
 Dose: 0, 250 mg/kg
 Exposure time: 13 wk
 Number of exposures: daily
 NOEL: > 250 mg/kg

**CuLator Metal Eliminator
Further information**

: The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 12: Ecological information**Toxicity to fish**

2,5-Furandione, polymer with 1-octadecene, sodium salt : LC50: > 1,000 mg/l
 Exposure time: 96 h
 Species: *Scophthalmus maximus* (Flatfish, Flounder)
 semi-static test

Toxicity to algae

2,5-Furandione, polymer with 1-octadecene, sodium salt : EL50: > 1,000 mg/l
 Exposure time: 72 h
 Species: *Skeletonema costatum* (Marine Algae)
 static test

Elimination information (persistence and degradability)

Biodegradability : This material is not expected to be readily biodegradable.

Additional ecological information : This material is not expected to be harmful to aquatic organisms.

SECTION 13: Disposal considerations

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information**National legislation**

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

SARA 311/312 Hazards : No SARA Hazards

CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know: No components are subject to the Pennsylvania Right to Know Act.

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

New Jersey Right To Know: No components are subject to the New Jersey Right to Know Act.

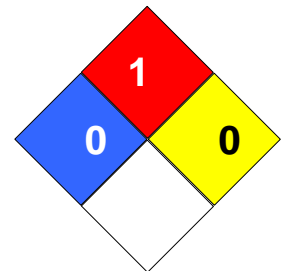
California Prop. 65: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.
Ingredients

Notification status

Europe REACH : On the inventory, or in compliance with the inventory
 United States of America US.TSCA : On the inventory, or in compliance with the inventory
 Canada DSL : On the inventory, or in compliance with the inventory
 Australia AICS : On the inventory, or in compliance with the inventory
 New Zealand NZIoC : Not in compliance with the inventory
 Japan ENCS : On the inventory, or in compliance with the inventory
 Korea KECI : On the inventory, or in compliance with the inventory
 Philippines PICCS : On the inventory, or in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 0
 Fire Hazard: 1
 Reactivity Hazard: 0

**Further information**

Legacy MSDS Number : CL0001

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency

CuLator Metal Eliminator

Version 1.1

Revision Date 2015-04-01

NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		