

## SAFETY DATA SHEET CuLator Metal Eliminator

Version 1.3

Revision Date 2022-09-07

JIION I: Identification of	the substance/mixture and of the company/undertaking
Product information	
Trade names	: CuLator Metal Eliminator, Metal XTract, CuLator Ultra 4.0, CuLat InLine Pro Filter Cartridge, FillFast CuLator Metal Eliminator Filte Cartridge
Use	: Metal Chelating Agent, Metal Sequestering Agent
Company	: Periodic Products, Inc. 6000 Cattleridge Dr., Suite 206 Sarasota, FL 34232
Emergency telephone:	
Health:	
866.442.9628 (North A 1.832.813.4984 (Interr <b>Transport</b> : North America: CHEM Asia: +800 CHEMCAL EUROPE: BIG +32.14	national) ITREC 800.424.9300 or 703.527.3887
Responsible Department E-mail address	: Product Safety
Website	<ul><li>info@periodicproducts.com</li><li>www.periodicproducts.com</li></ul>
Website	<ul> <li>info@periodicproducts.com</li> <li>www.periodicproducts.com</li> </ul>
Website CTION 2: Hazards identific Emergency Overview	: info@periodicproducts.com : www.periodicproducts.com cation
Website CTION 2: Hazards identific Emergency Overview	<ul> <li>info@periodicproducts.com</li> <li>www.periodicproducts.com</li> </ul>
Website CTION 2: Hazards identific Emergency Overview Form: Powder Physica	<ul> <li>info@periodicproducts.com</li> <li>www.periodicproducts.com</li> </ul> cation          cation         al state: Solid       Color: white to yellow         : This material is not hazardous under the criteria of the Federal
Website CTION 2: Hazards identifie Emergency Overview Form: Powder Physica OSHA Hazards GHS Classification	<ul> <li>info@periodicproducts.com</li> <li>www.periodicproducts.com</li> </ul> cation          cation         al state: Solid       Color: white to yellow         : This material is not hazardous under the criteria of the Federal
Website CTION 2: Hazards identifie Emergency Overview Form: Powder Physica OSHA Hazards GHS Classification	<ul> <li>info@periodicproducts.com</li> <li>www.periodicproducts.com</li> </ul> cation al state: Solid Color: white to yellow <ul> <li>This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.</li> </ul>
Website CTION 2: Hazards identifie Emergency Overview Form: Powder Physica OSHA Hazards GHS Classification Not a dangerous substance GHS-Labeling	<ul> <li>info@periodicproducts.com</li> <li>www.periodicproducts.com</li> </ul> cation al state: Solid Color: white to yellow <ul> <li>This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.</li> </ul>

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Carcinogenicity:				
IARC	equal to	0.1% is identified a	t present at levels greater than or s probable, possible or confirmed	
NTP	No ingree equal to	human carcinogen by IARC. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen		
ACGIH	by NTP. 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.			
CTION 3: Composition/infor	: Poly-oc 2,5-Fur	ngredients ctadecylbutanedioa randione, polym cene, sodium salt		
Molecular formula		-C4H2O4Na2)x		
Contains no hazardous ingre	edients accor	rding to GHS.	Weight %	
Poly-octadecylbutanedioate		110707-31-8	100	
, ,			I	
CTION 4: First aid measures	1			
CTION 4: First aid measures				
CTION 4: First aid measures General advice		leave the victim un	attended.	

SECTION 5: Firefighting measu	ures		
Flash point	:	No data available	
Autoignition temperature	:	Not applicable	
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for fire fightin necessary.	g if
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In case of eye contact

If swallowed

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

: 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.

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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.
ECTION 6: Accidental release	me	asures
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.
ECTION 7: Handling and stora	age	
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	Inor	sonal protoction
	hei	
Engineering measures		
activities, and other substand personal protective equipme exposure to harmful levels o recommended. The user sh	ces i nt. 1 f this ould	f this material (see Section 2), applicable exposure limits, job in the work place when designing engineering controls and selecting If engineering controls or work practices are not adequate to prevent is material, the personal protective equipment listed below is read and understand all instructions and limitations supplied with the ually provided for a limited time or under certain circumstances.
Personal protective equipr	nen	t

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
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		uld be taken to avoid skin contact. c workplace should be discussed protective gloves.
Eye protection	: Safety glasses.	
Skin and body protection		relation to its type, to the of dangerous substances, and to the r as appropriate: Lightweight
Hygiene measures	: General industrial hygiene	practice.
CTION 9: Physical and chem	ical properties	
Information on basic physic	cal and chemical properties	
Appearance		
Form Physical state Color	: Powder : Solid : 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 <sub>18</sub> H <sub>36</sub> -C <sub>4</sub> H <sub>2</sub> O <sub>4</sub> Na <sub>2</sub> )x	
Molecular Weight	: No data available	
рН	: 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	
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Evaporation rate	:	Not applicable
Percent volatile	:	< 1 %
CTION 10: Stability and reactive	vity	1
Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reac	tio	ns
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.
TION 11: Toxicological inform	na	tion
Acute oral toxicity		
2,5-Furandione, polymer with 1-octadecene, sodium salt	:	LD50: > 8,000 mg/kg Species: rat
	:	
1-octadecene, sodium salt		Species: rat
1-octadecene, sodium salt Acute inhalation toxicity 2,5-Furandione, polymer with		Species: rat
<ul> <li>1-octadecene, sodium salt</li> <li>Acute inhalation toxicity</li> <li>2,5-Furandione, polymer with</li> <li>1-octadecene, sodium salt</li> </ul>	:	Species: rat
1-octadecene, sodium salt Acute inhalation toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Acute dermal toxicity 2,5-Furandione, polymer with	:	Species: rat No data available LD50: > 2,000 mg/kg Species: rat
1-octadecene, sodium salt <b>Acute inhalation toxicity</b> 2,5-Furandione, polymer with 1-octadecene, sodium salt <b>Acute dermal toxicity</b> 2,5-Furandione, polymer with 1-octadecene, sodium salt	:	Species: rat No data available LD50: > 2,000 mg/kg Species: rat Method: OECD Test Guideline 402
1-octadecene, sodium salt Acute inhalation toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Acute dermal toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Skin irritation 2,5-Furandione, polymer with	:	Species: rat No data available LD50: > 2,000 mg/kg Species: rat Method: OECD Test Guideline 402
1-octadecene, sodium salt Acute inhalation toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Acute dermal toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Skin irritation 2,5-Furandione, polymer with 1-octadecene, sodium salt Eye irritation 2,5-Furandione, polymer with	:	Species: rat No data available LD50: > 2,000 mg/kg Species: rat Method: OECD Test Guideline 402 No skin irritation
1-octadecene, sodium salt Acute inhalation toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Acute dermal toxicity 2,5-Furandione, polymer with 1-octadecene, sodium salt Skin irritation 2,5-Furandione, polymer with 1-octadecene, sodium salt Eye irritation 2,5-Furandione, polymer with 1-octadecene, sodium salt	:	Species: rat No data available LD50: > 2,000 mg/kg Species: rat Method: OECD Test Guideline 402 No skin irritation No eye irritation

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	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.
TION 12: Ecological information	on
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 (persiste	nce 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.
TION 13: Disposal considerati	ons
The information in this MSDS pe	ertains only to the product as shipped.
Use material for its intended pur may meet the criteria of a hazar other State and local regulations regulated components may be r	pose or recycle if possible. This material, if it must be discarded, dous waste as defined by US EPA under RCRA (40 CFR 261) or s. Measurement of certain physical properties and analysis for necessary to make a correct determination. If this material is , federal law requires disposal at a licensed hazardous waste
TION 14: Transport informatio	n

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### 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.

IAT A (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

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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.
Potential Class I	I C	uct neither contains, nor was manufactured with a Class I or DDS as defined by the U.S. Clean Air Act Section 602 (40 CFR t. A, App.A + B).
		ny hazardous air pollutants (HAP), as defined by the U.S. Clean Air
This product does not contair Accidental Release Preventic		ny chemicals listed under the U.S. Clean Air Act Section 112(r) for (40 CFR 68.130, Subpart F).
This product does not contair Intermediate or Final VOC's (		ny chemicals listed under the U.S. Clean Air Act Section 111 SOCM CFR 60.489).
US State Regulations		
Pennsylvania Right To Know	: 1	No components are subject to the Pennsylvania Right to Know Act.

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New Jersey F	Right To Know:	No components a	re subject to the	e New Jerse	ey Right to K	ínow Act.
California Pro Ingredients	op. 65:	This product does of California to ca defects.				
Notification Europe REA United States Canada DS Australia Al New Zealand Japan ENCS Korea KECI Philippines F China IECS	ACH s of America US L CS I NZIoC S PICCS	STSCA : On t : On t : On t : Not : On t : On t : On t : On t	he inventory, o he inventory, o he inventory, o in compliance he inventory, o he inventory, o he inventory, o he inventory, o	r in complia r in complia r in complia with the inv r in complia r in complia r in complia	nce with the ince with the entory ince with the ince with the ince with the	inventory inventory inventory inventory inventory inventory inventory
CTION 16: Ot	ner information					
NFPA GIASS	ification	: Health Hazard Fire Hazard: 1 Reactivity Haz				
NFFA Glass	ification	Fire Hazard: 1			0	0
Further info		Fire Hazard: 1			0	0
	rmation	Fire Hazard: 1			0	0
<b>Further info</b> Legacy MSD	<b>rmation</b> S Number hanges since the	Fire Hazard: 1 Reactivity Haz	ard: 0	margin. Thi		
Further info Legacy MSD Significant ch previous vers The informat	<b>rmation</b> S Number hanges since the sions. ion in this SDS p	Fire Hazard: 1 Reactivity Haz : CL0001 last version are hig ertains only to the	ard: 0 ghlighted in the product as ship	ped.	is version rep	places all
Further info Legacy MSD Significant ch previous vers The informat information a guidance for to be conside material desi	rmation NS Number hanges since the sions. ion in this SDS p ion provided in th and belief at the c safe handling, us ered a warranty c gnated and may	Fire Hazard: 1 Reactivity Haz : CL0001 last version are hig	ard: 0 ghlighted in the product as ship ret is correct to in. The information rage, transportation. The information on. The information the information of the inform	ped. the best of tion given is ation, dispos	our knowledge designed or al and release only to the	places all ge, nly as a se and is not specific
Further info Legacy MSD Significant ch previous vers The informat information a guidance for to be conside material desi materials or in	rmation S Number S Number ion in this SDS p ion provided in the and belief at the c safe handling, us ered a warranty c gnated and may in any process, u	Fire Hazard: 1 Reactivity Haz : CL0001 last version are hig ertains only to the p is Safety Data She date of its publications e, processing, stor or quality specifications not be valid for suc inless specified in t	ard: 0 ghlighted in the product as ship et is correct to in. The informat rage, transporta on. The informat ch material used he text.	ped. the best of tion given is ation, dispos ation relates d in combination in the safet	is version rep our knowledge designed or al and release only to the ation with an	places all ge, nly as a se and is not specific ny other
Further info Legacy MSD Significant ch previous vers The informat information a guidance for to be conside material desi materials or i	rmation S Number S Number S Number ion provided in the safe handling, us ered a warranty of gnated and may in any process, u Key or legend to American Cor Government In Australia, Inve	Fire Hazard: 1 Reactivity Haz : CL0001 last version are hig ertains only to the p is Safety Data She date of its publications e, processing, stor or quality specifications not be valid for suc inless specified in t	ard: 0 ghlighted in the product as ship wet is correct to on. The information age, transportation. The information on. The information whe text.	ped. the best of tion given is ation, dispos ation relates d in combina <u>in the safet</u> Lethal D	is version rep our knowledge designed of al and release s only to the ation with an	places all ge, nly as a se and is not specific by other
Further info Legacy MSD Significant ch previous vers The informat information a guidance for to be conside material desi materials or in ACGIH	rmation S Number S Number S Number ion since the sions. ion in this SDS p ion provided in the and belief at the c safe handling, us ered a warranty c gnated and may in any process, u Key or legend to American Cor Government In Australia, Inve Substances	Fire Hazard: 1 Reactivity Haz : CL0001 last version are hig ertains only to the p as Safety Data She date of its publications e, processing, stor or quality specifications not be valid for suc inless specified in t abbreviations and a ference of ndustrial Hygienists	ard: 0 and: 0 and: 0 and: 0 and: 0 and the analysis and the analysis analysi analysis analysi analysis analysi analysi	ped. the best of tion given is ation, dispos ation relates d in combina <u>in the safet</u> Lethal D Lowest Level	our knowledges designed or al and releases only to the ation with an	places all ge, nly as a se and is not specific ny other

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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%		