

CALCIUM 2,2,6,6-TETRAMETHYL-3,5-HEPTANEDIONATE

Safety Data Sheet AKC172 Date of issue: 01/09/2017 Version: 1.0

SECTION 1: Identification			
.1. Product identifier			
Product name	: CALCIUM 2,2,6,6-TETRAMETH	(L-3.5-HEPTANEDIONATE	
Product code	: AKC172	,	
Product form	: Substance		
Physical state	: Solid		
Formula	: C22H38CaO4		
Synonyms	: CALCIUM DPM		
Gynonyms	CALCIUM TMHD CALCIUM BIS(DIPIVALOYLMET		
	BIS(TETRAMETHYLHEPTANED		
Chemical family	: METAL COMPOUND		
1.2. Recommended use of the chem	aical and restrictions on use		
Recommended use	: Chemical intermediate		
Recommended use	For research use only		
1.3. Details of the supplier of the sa	fety data sheet		
GELEST, INC.			
11 East Steel Road Morrisville, PA 19067			
T 215-547-1015 - F 215-547-2484 - (M-F): { info@gelest.com - <u>www.gelest.com</u>	3:00 AM - 5:30 PM EST		
1.4. Emergency telephone number			
Emergency number	: CHEMTREC: 1-800-424-9300 (U	SA); +1 703-527-3887 (International)	
SECTION 2: Hazard(s) identificat	ion		
2.1. Classification of the substance			
GHS-US classification			
Serious eye damage/eye irritation Category	2A H319		
Full text of H statements : see section 16			
2.2. Label elements			
GHS-US labeling			
Hazard pictograms (GHS-US)			
	GHS07		
Signal word (GHS-US)	GHS07 : Warning		
3 ()		on	
Signal word (GHS-US) Hazard statements (GHS-US) Precautionary statements (GHS-US)	: Warning : H319 - Causes serious eye irritat	ion otective clothing/eye protection/face protec	tion
Hazard statements (GHS-US)	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a 	otective clothing/eye protection/face protec fter handling	
Hazard statements (GHS-US)	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min	
Hazard statements (GHS-US)	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and east 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US)	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS U	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS UN) No data available	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS U No data available	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS UN) No data available SECTION 3: Composition/Inform	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS U No data available SECTION 3: Composition/Inform 3.1. Substances	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS U No data available SECTION 3: Composition/Inform 3.1. Substances Substance type	: Warning : H319 - Causes serious eye irritat : P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and ear P337+P313 - If eye irritation pers ed (HNOC) IS) ation on ingredients	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing ists: Get medical advice/attention	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS U No data available SECTION 3: Composition/Inform 3.1. Substances Substance type Name	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers ed (HNOC) US) ation on ingredients Mono-constituent 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing ists: Get medical advice/attention	
Hazard statements (GHS-US) Precautionary statements (GHS-US) 2.3. Hazards not otherwise classifie No additional information available 2.4. Unknown acute toxicity (GHS U No data available SECTION 3: Composition/Inform	 Warning H319 - Causes serious eye irritat P280 - Wear protective gloves/pr P264 - Wash hands thoroughly a P305+P351+P338 - IF IN EYES: contact lenses, if present and eas P337+P313 - If eye irritation pers ed (HNOC) IS) ation on ingredients Mono-constituent CALCIUM 2,2,6,6-TETRAMETHY 	otective clothing/eye protection/face protec fter handling Rinse cautiously with water for several min sy to do. Continue rinsing ists: Get medical advice/attention	

Name		Product identifier	%	GHS-US classification
Calcium 2,2,6,6-tetramethyl-3,5-heptanedionate		(CAS No) 118448-18-3	95 - 100	Eye Irrit. 2A, H319
Full text of hazard classes and H-statements : s 3.2. Mixtures	see section	116		
Not applicable				
4.1. Description of first aid measures	. Dom	ave contominated elething and above	a In anno of anoidan	t ar if you faal ynwall, aaak
First-aid measures general	medi	ove contaminated clothing and shoe cal advice immediately (show the lal able show packaging or label.		
First-aid measures after inhalation		ove victim to fresh air and keep at re II, seek medical advice.	est in a position comf	ortable for breathing. If you feel
First-aid measures after skin contact		n with plenty of soap and water. Get		
First-aid measures after eye contact	prese	ediately flush eyes thoroughly with went and easy to do. Continue rinsing	. Get medical advice/	attention.
First-aid measures after ingestion	: Neve	r give anything by mouth to an unco	onscious person. Get	medical advice/attention.
4.2. Most important symptoms and effe	cts, both	acute and delayed		
Symptoms/injuries after inhalation	: May	cause irritation to the respiratory trac	ct.	
Symptoms/injuries after skin contact		cause skin irritation.		
Symptoms/injuries after eye contact		es serious eye irritation.		
Symptoms/injuries after ingestion	: No in	formation available.		
4.3. Indication of any immediate medica	al attentio	on and special treatment needed		
No additional information available				
SECTION 5: Firefighting measures				
5.1. Extinguishing media				
Suitable extinguishing media	: Wate	r spray. Foam. Carbon dioxide. Dry	chemical.	
Insuitable extinguishing media	: None	known.		
5.2. Special hazards arising from the su	ubstance	or mixture		
Fire hazard		ing fumes and organic acid vapors r	may develop when m	aterial is exposed to elevated
		eratures or open flame.		
5.3. Advice for firefighters				
Firefighting instructions	: Exerc	cise caution when fighting any chem	ical fire. Use water s	pray to cool exposed surfaces.
Protection during firefighting		ot enter fire area without proper prot I contact with skin and eyes. Do not		cluding respiratory protection.
SECTION 6: Accidental release mea	sures			
6.1. Personal precautions, protective ed		and emergency procedures		
6.1.1. For non-emergency personnel		5		
Protective equipment	· \//	r protective equipment as described	in Section 8	
Emergency procedures		uate unnecessary personnel.		
	• 40	and a more soury personnel.		
6.1.2. For emergency responders	_			
Protective equipment	prope	ot attempt to take action without suit er protection. For further information ction".		
6.2. Environmental precautions				
Prevent entry to sewers and public waters. Noti	fy authorit	ies if product enters sewers or public	c waters.	
6.3. Methods and material for containm	ent and c	leaning up		
For containment		ain any spills with dikes or absorben	ts to prevent migration	on and entry into sewers or
Methods for cleaning up	: Swee	ep or shovel spills into appropriate co	ontainer for disposal.	
6.4. Reference to other sections				
See Heading 8. Exposure controls and persona	l protectio	n.		
SECTION 7: Handling and storage				
7.1. Precautions for safe handling				
Precautions for safe handling	: Avoir	d contact with skin and eyes. Do not	breathe dust Avoid	dust formation. Provide local
Hygiene measures	exha : Wasł	ust or general room ventilation to mi	nimize exposure to c e. Wash hands and c	lust. other exposed areas with mild
	soap	and water before eating, drinking or	r smoking and when	leaving work.
Print date: 01/09/2017	ENI (En	alish LIS)	SDS ID [.] AKC172	2/

Storage conditions	: Keep container tightly closed.
Storage area	: Store in a well-ventilated place. Store away from heat.
SECTION 8: Exposure controls/pers	sonal protection
8.1. Control parameters	
No additional information available	
8.2. Exposure controls	
Appropriate engineering controls	: Provide local exhaust or general room ventilation.
Personal protective equipment	: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hand protection	: Neoprene or nitrile rubber gloves.
Eye protection	: Chemical goggles. Contact lenses should not be worn.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (teal cartridge) respirator.
SECTION 9: Physical and chemical	properties
9.1. Information on basic physical and	· · ·
Physical state	: Solid
Appearance	: Crystals.
Molecular mass	: 406.63 g/mol
Color	: White to off-white.
Odor	: No data available
Odor threshold	: No data available
Refractive index	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
	: 220 - 223 °C
Melting point	
Freezing point	: No data available
Boiling point	: 175 °C @ 0.01 mm Hg sub
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: < 0.01 mm Hg @ 20°C
Relative vapor density at 20 °C	: No data available
Relative density	: <1
VOC content	: <3%
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available
9.2. Other information	
No additional information available	
SECTION 10: Stability and reactivity	
10.1. Reactivity	
No additional information available	
10.2. Chemical stability	

10.3. Possibility of hazardous reactions	
Material decomposes slowly in contact with air b	by reaction with water and carbon dioxide.
10.4. Conditions to avoid	
No additional information available	
10.5. Incompatible materials	
No additional information available	
10.6. Hazardous decomposition product	S
Organic acid vapors. Calcium oxide fumes.	
SECTION 11: Toxicological informa	tion
11.1. Information on toxicological effects	
Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
	None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen
Reproductive toxicity	: Not classified
Specific target organ toxicity - single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	: May cause skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	No information available.
Reason for classification	: Expert judgment
SECTION 12: Ecological information	n
12.1. Toxicity	
No additional information available	
12.2. Persistence and degradability	
No additional information available	
12.3. Bioaccumulative potential	
No additional information available	
12.4. Mobility in soil	
No additional information available	
12.5. Other adverse effects	
Effect on ozone layer	: No additional information available
Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.
SECTION 13: Disposal consideratio	ns
13.1. Waste treatment methods	
Sewage disposal recommendations	Do not dispose of waste into sewer. Dispose in a safe manner in accordance with local/national regulations
Waste disposal recommendations Ecology - waste materials	 Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.
SECTION 14: Transport information	
14.1. UN number	

14.2. UN proper shipping name		
Not applicable		
14.3. Additional information		
Other information	: No suppleme	ntary information available.
Transport by sea		
No additional information available		
Air transport No additional information available		
SECTION 15: Regulatory infor	mation	
15.1. US Federal regulations		
CALCIUM 2,2,6,6-TETRAMETHYL-3,	5-HEPTANEDIONATE (1 ²	18448-18-3)
TSCA Exemption/Exclusion		CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States
Calcium 2,2,6,6-tetramethyl-3,5-hept		
Not listed on the United States TSCA (Toxic Substances Control	I Act) Inventory
15.2. International regulations		
CANADA No additional information available		
EU-Regulations		
No additional information available		
National regulations No additional information available		
15.3 LIS State regulations		
15.3. US State regulations No additional information available		
	-	
No additional information available	n	
No additional information available SECTION 16: Other information	n	
	n	Causes serious eye irritation
No additional information available SECTION 16: Other information Full text of H-phrases::	: Abbreviations Concentration millimeters Hy threshold limi Health; IARC Program; HM Registration N European Co	Causes serious eye irritation s: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal n; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: g, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: t value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety an : International Agency for Research on Cancer; NTP: National Toxicology IIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Services Number; EC No.: European Commission Registration Number; EC Index No.: mmission Index Number; OECD: The Organisation for Economic Co-operation nent; GHS: The Globally Harmonized System of Classification and Labelling.
No additional information available SECTION 16: Other information Full text of H-phrases:: H319 Abbreviations and acronyms	: Abbreviations Concentration millimeters Hy threshold limi Health; IARC Program; HM Registration N European Co	s: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal n; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: g, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: t value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety an International Agency for Research on Cancer; NTP: National Toxicology IIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Number; EC No.: European Commission Registration Number; EC Index No.: mmission Index Number; OECD: The Organisation for Economic Co-operation
No additional information available SECTION 16: Other information Full text of H-phrases:: H319 Abbreviations and acronyms HMIS III Rating	: Abbreviations Concentration millimeters Hy threshold limi Health; IARC Program; HM Registration N European Co and Developr	s: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal n; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: g, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: t value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety an i International Agency for Research on Cancer; NTP: National Toxicology IIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Number; EC No.: European Commission Registration Number; EC Index No.: mmission Index Number; OECD: The Organisation for Economic Co-operation
No additional information available SECTION 16: Other information Full text of H-phrases:: H319	: Abbreviations Concentration millimeters Hy threshold limi Health; IARC Program; HM Registration N European Co and Developr : 2 Moderate H : 1 Slight Haza	s: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal n; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: g, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: t value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety an : International Agency for Research on Cancer; NTP: National Toxicology IIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Number; EC No.: European Commission Registration Number; EC Index No.: mmission Index Number; OECD: The Organisation for Economic Co-operation nent; GHS: The Globally Harmonized System of Classification and Labelling.

Prepared by safety and environmental affairs.

Date of issue: 01/09/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

© 2016 Gelest Inc. Morrisville, PA 19067

