

Chris King® Silver Grease

THB027; THB028

SDS Preparation Date (mm/dd/yyyy): 04/01/2019

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: Chris King® Silver Grease

Other means of identification: THB027; THB028

Recommended use of the chemical and restrictions on use

: Lubricating grease for bicycles. Restrictions on use: Not available.

Chemical family : Mixture of: Base oil; Calcium sulfonate thickener; Anti-wear additives

Name, address, and telephone number

Name, address, and telephone number of the manufacturer:

of the supplier: King Cycle Group, Inc.

Refer to supplier

DBA Chris King Precision Components

2801 NW Nela Street Portland, OR, U.S.A.

97210

Supplier's Telephone # : +1 (503) 972-4050; +1 (800) 523-6008 (Toll free) (Monday to Friday, 8 am to 5 pm,

Pacific Time)

24 Hr. Emergency Tel #: Chemtrec: +1 (800) 424-9300 (Within Continental U.S.); +1 (703) 527-3887.

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Platinum Semi-Solid. Petroleum odor.

Most important hazards:

Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. See Section 12 for more environmental information.

This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Label elements

Hazard pictogram(s)

None required under U.S. OSHA Hazcom 2012 and Canadian WHMIS 2015 regulations.

Signal Word

None required under OSHA HazCom2012 and 2015 Canadian WHMIS regulations.

Hazard statement(s)

None required under OSHA HazCom2012 and 2015 Canadian WHMIS regulations.

Precautionary statement(s)

None required under OSHA HazCom2012 and 2015 Canadian WHMIS regulations.



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Other hazards

Other hazards which do not result in classification:

Toxic fumes may be released during a fire. Direct eye contact may cause slight or mild, transient irritation. Direct skin contact may cause slight or mild, transient irritation. If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. May cause gastrointestinal irritation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS#	Concentration (% by weight)
Molybdenum disulfide	Molybdenum sulfide	1317-33-5	3.0 - 7.0

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If

symptoms develop, seek medical attention.

Inhalation : If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. If

breathing is difficult, give oxygen by qualified medical personnel only. If irritation or

symptoms develop, seek medical attention.

Skin contact : For skin contact, wash with soap and water while removing contaminated clothing. If

irritation or symptoms develop, seek medical attention.

Eye contact : Flush contaminated area with lukewarm, gently running water for at least 5 to 10

minutes or until the chemical is removed. If irritation or symptoms develop, seek

medical attention.

Most important symptoms and effects, both acute and delayed

: Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing.

Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may

cause temporary redness.

If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. May cause coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

: Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

 Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

: Do not use water jet, as this may spread burning material.

Special hazards arising from the substance or mixture / Conditions of flammability

Not considered flammable. However, may burn if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes may be released during a fire.

Flammability classification (OSHA 29 CFR 1910.106)

: Not classified as flammable.



King Cycle Group, Inc. DBA Chris King Precision Components 2801 NW Nela Street Portland, OR 97210 U.S.A.

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Hazardous combustion products

: Carbon oxides; Sulfur oxides; Nitrogen oxides (NOx); Phosphorus oxides; Metal oxides; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Normal protective clothing (bunker gear) may not be adequate. A full-body encapsulating chemical protective suit may be necessary.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with the clean-up should wear the appropriate personal protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

Methods and material for containment and cleaning up

: Ventilate the area. Prevent further leakage or spillage if safe to do so. Eliminate all ignition sources. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Keep in properly labelled containers. Contact the proper local authorities.

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).

US CERCLA Reportable quantity (RQ): None known.

In Canada: Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Use with adequate ventilation. Wear protective equipment during handling. Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and flame. Keep away from incompatibles. Keep container tightly closed when not in use. Wash thoroughly after handling. Empty containers retain residue and can be dangerous.

Conditions for safe storage

Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks.

Incompatible materials

: Strong oxidizing agents; Strong reducing agents.



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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:						
Chemical Name	ACGIH TL	<u>v</u>	OSHA I	OSHA PEL		
	<u>TWA</u>	<u>STEL</u>	PEL	STEL.		
Molybdenum disulfide	10 mg/m³ (inhalable); 3 mg/m³ (respirable) (as Mo) (insoluble compounds)	N/Av	15 mg/m³ (total dust) (as Mo) (insoluble compounds)	N/Av		

Exposure controls

Ventilation and engineering measures

: Provide adequate ventilation. Local ventilation is recommended if the product is

misted or used in a confined space, or if the TLV is exceeded.

Respiratory protection: If airbourne concentrations are above the permissible exposure limit or are not known,

use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection

specialists.

Skin protection: Gloves impervious to the material are recommended. The suitability for a specific

workplace should be discussed with the producers of the protective gloves. Depending

on conditions of use, an impervious apron should be worn.

Eye / face protection : Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate

working area. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing fumes, mists or vapors. Avoid contact with skin, eyes and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in

accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Platinum. Semi-Solid
Odour : Petroleum odor.

 $\begin{array}{cccc} \textbf{Odour threshold} & : & \text{N/Av} \\ \textbf{pH} & : & \text{N/Ap} \\ \end{array}$

Melting Point/Freezing point: Melting point: N/Av

Freezing point: N/Av

Initial boiling point and boiling range

N/Av

Flash point : > 150°C (302°F)

Flashpoint (Method) : Pensky Martens Closed Cup

Evaporation rate (BuAe = 1) : N/Av Flammability (solid, gas) : N/Ap Lower flammable limit (% by vol.)

N/Av

Upper flammable limit (% by vol.)

: N/Av

Oxidizing properties : No oxidizing properties.



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Explosive properties: Not explosive

Vapour pressure : N/Av

Vapour density : > 1 (Air = 1.0)

Relative density / Specific gravity

: Relative density: 999 kg/m³ (8.34 lbs/gal) @ 15.6°C (60°F)

Specific Gravity: 1.0 @ 15.6°C (60°F)

Solubility in water : Negligible.
Other solubility(ies) : N/Av

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

Auto-ignition temperature : N/Av **Decomposition temperature** : N/Av

Viscosity : 37 cSt @ 40°C (104°F) (Base Oil)

Volatiles (% by weight) : N/Av Volatile organic Compounds (VOC's)

: N/Av

Absolute pressure of container

: N/Ap

Flame projection length : N/Ap Other physical/chemical comments

: Dropping point: 280°C (536°F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: Hazardous polymerization does not occur. No dangerous reaction known under

conditions of normal use.

Conditions to avoid : Ensure adequate ventilation, especially in confined areas. Avoid contact with

incompatible materials. Avoid heat and open flame.

Incompatible materials : Strong oxidizing agents; Strong reducing agents

Hazardous decomposition products

Not available.

In the event of fire: Refer also to hazardous combustion products, Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES
Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. May cause coughing and breathing difficulties.



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Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin : Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may

cause temporary redness.

Sign and symptoms eyes : Direct eye contact may cause slight or mild, transient irritation. Symptoms may include

stinging and tearing.

Potential Chronic Health Effects

: Repeated exposure may cause skin dryness or cracking.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1%

are mutagenic or genotoxic.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material: Not expected to be a skin or respiratory sensitizer.

Specific target organ effects: Not classified as a specific target organ toxicity-single exposure.

Not classified as a specific target organ toxicity - repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: None known or reported by the manufacturer.

Toxicological data

Not classified for acute toxicity based on available data. No data is available on the

product itself.

See below for individual ingredient acute toxicity data.

	LCso(4hr)	LDs)	
Chemical name	inh, rat	(Oral, rat)	(Rabbit, dermal)	
Molybdenum disulfide	> 2.82 mg/L (dust) (No mortality)	> 2000 mg/kg (No mortality)	> 2000 mg/kg (No mortality)	

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

Ingradianta	CACNO	Toxicity to Fish				
<u>Ingredients</u>	CAS No	LC50 / 96h	NOEC / 21 day	M Factor		
Molybdenum disulfide	1317-33-5	644.2 mg/L (Fathead minnow)	N/Av	None.		



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<u>Ingredients</u>	CAS No	Toxi		
		EC50 / 48h	NOEC / 21 day	M Factor
Molybdenum disulfide	1317-33-5	130.9 mg/L (Daphnia magna)	156.5 mg/L	None.

<u>Ingredients</u>	CAS No	То	oxicity to Algae			
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor		
Molybdenum disulfide	1317-33-5	289.2 mg/L/72hr (Green algae)	N/Av	None.		

Persistence and degradability

: No data is available on the product itself.

Contains the following chemicals which are not readily biodegradable: Molybdenum

sulfide.

Bioaccumulation potential: No data is available on the product itself.

Components	Partition coefficient n-octanol/water (log Kow) Bioco	ncentration factor (BCF)

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.



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SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	not regulated	none	\otimes
49CFR/DOT Additional information	None.				
TDG	None.	Not regulated.	not regulated	none	\bigotimes
TDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	\bigotimes
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	not regulated	none	\bigotimes
IMDG Additional information	None.				

Special precautions for user:

Appropriate advice on safety must accompany the package. Keep away from flames

and sparks.

Environmental hazards

This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

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

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

	TSCA		CERCLA Reportable	SARA TITLE III: Sec. 302, Extremely	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical		
<u>Ingredients</u>	CAS#	Inventory	Quantity(RQ) (40 CFR 117.302):	Hazardous Substance, 40 CFR 355:	Toxic Chemical	de minimus Concentration	
Molybdenum disulfide	1317-33-5	Yes	None.	None.	No	N/Ap	

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: None. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.



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US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS#	California Proposition 65		State "Right to Know" Lists					
	57 to 11	Listed	Type of Toxicity	city CA MA MN	NJ	PA	RI		
Molybdenum disulfide	1317-33-5	No	N/Ap	No	Yes	No	No	No	No

Canadian Information:

CEPA information: All ingredients are listed on the DSL, or are exempted materials.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS#	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Molybdenum disulfide	1317-33-5	215-263-9	Present	Present	(1)-481	KE-25440	Present	May be used as a single component chemical under an appropriate group standard.

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists

AICS: Australian Inventory of Chemical Substances CA: California CAS: Chemical Abstract Services

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

of 1980

CFR: Code of Federal RegulationsDOT: Department of Transportation

ENCS: Existing and New Chemical Substances

EPA: Environmental Protection Agency

HMIS: Hazardous Materials Identification System

HSDB: Hazardous Substances Data Bank

IARC: International Agency for Research on Cancer IATA: International Air Transport Association ICAO: International Civil Aviation Organisation IMDG: International Maritime Dangerous Goods

Inh: Inhalation

IOC: Inventory of Chemicals

IUCLID: International Uniform Chemical Information Database

KECI: Korean Existing Chemicals Inventory KECL: Korean Existing Chemicals List

LC: Lethal Concentration

LD: Lethal Dose MA: Massachusetts MN: Minnesota

mppcf: million particles per cubic foot MSHA: Mine Safety and Health Administration



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N/Ap: Not Applicable N/Av: Not Available

NFPA: National Fire Protection Association

NIOSH: National Institute of Occupational Safety and Health

NJ: New Jersey

NOEC: No observable effect concentration

OECD: Organisation for Economic Co-operation and Development

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PA: Pennsylvania

PEL: Permissible exposure limit

PICCS: Philippine Inventory of Chemicals and Chemical Substances

RCRA: Resource Conservation and Recovery Act

RI: Rhode Island

RTECS: Registry of Toxic Effects of Chemical Substances SARA: Superfund Amendments and Reauthorization Act SDS: Safety Data Sheet / Material Safety Data Sheet

STEL: Short Term Exposure Limit

TDG: Canadian Transportation of Dangerous Goods Act & Regulations

TLV: Threshold Limit Values TWA: Time Weighted Average

TSCA: Toxic Substance Control Act

WHMIS: Workplace Hazardous Materials Identification System

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents &

Biological Exposure Indices for 2018.

2. International Agency for Research on Cancer Monographs, searched 2019.

3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2019

(Chempendium, HSDB and RTECs). 4. Safety Data Sheet from manufacturer.

5. US EPA Title III List of Lists - March 2015 version.

6. California Proposition 65 List - March 8, 2019 version.

7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal.

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Prepared for:

References

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product or in any other process.

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