

Chris King® Silver Grease

THB027; THB028

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

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SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier : **Chris King® Silver Grease**

Product Code(s) : THB027; THB028

1.2 Relevant identified uses of the substance or mixture and uses advised against

: Lubricating grease for bicycles.
Use pattern: professional use Consumer use Retail products
No restrictions on use known.

1.3 Details of the supplier of the safety data sheet:

King Cycle Group, Inc.
DBA Chris King Precision Components
2801 NW Nela Street
Portland, Oregon 97210 U.S.A.
Website: www.chrisking.com
Email: info@chrisking.com

Telephone : +1 (503) 972-4050

1.4 Emergency Telephone Number

: +1 (703) 527-3887 (Chemtrec - U.S.)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Platinum - Semi-solid. Petroleum odour.

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.

The product is not classified as hazardous according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Hazard pictogram(s)

None required according to Regulation (EC) No. 1272/2008.

Hazardous components which must be listed on the label:

None.

Signal word:

None required according to Regulation (EC) No. 1272/2008.

Hazard statements:

None required according to Regulation (EC) No. 1272/2008.

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Precautionary statements:

None required according to Regulation (EC) No. 1272/2008.

Supplemental Hazard Statements:

None required according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

Other hazards which do not result in classification:

Burning produces obnoxious and toxic fumes.

Direct eye contact may cause slight or mild, transient irritation. Direct skin contact may cause slight or mild, transient irritation. If product is heated, inhalation of fumes may cause irritation to the nose, throat and respiratory tract. May cause gastrointestinal irritation.

PBT assessment:

This mixture contains no substance(s) above reportable levels which are considered to be persistent, bioaccumulating nor toxic (PBT), or very persistent and very bioaccumulating (vPvB).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

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

The following substances shall be indicated according to legislation:

Chemical name	CAS #	EC No.	Concentration	CLP Classification
Molybdenum disulphide	1317-33-5	215-263-9	3.0 - 7.0	not hazardous (self classified) Substances for which there are Member Country workplace exposure limits.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

- Ingestion* : Do not induce vomiting. Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt, seek medical advice.
- 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. When symptoms persist or in all cases of doubt, seek medical advice.
- 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.

4.2 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, inhalation of fumes 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.

4.3 Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

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SECTION 5. FIRE-FIGHTING MEASURES

5.1 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.

5.2 Special hazards arising from the substance or mixture

- : 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. Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: Carbon oxides; Sulphur oxides; Nitrogen oxides (NO_x); Phosphorus compounds; Metal oxides; Other unidentified organic compounds.

5.3 Advice 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.

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

6.1 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.

6.2 Environmental precautions

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. Avoid release to the environment.

6.3 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). Pick up and transfer to properly labeled containers. Contact the proper local authorities.

6.4 Reference to other sections

- : Refer to protective measures listed in sections 7 and 8. Refer to Section 13 for disposal of contaminated material.

SECTION 7. HANDLING AND STORAGE

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

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- : 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. Store away from incompatible materials (see Section 10 of the SDS).

7.3 Specific end use(s) : Lubricant

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Exposure Limits:			
<u>Chemical Name</u>	<u>Exposure Limits</u>	<u>Type</u>	<u>Notes</u>
Molybdenum disulphide	10.0 mg/m ³ (TWA)	Bulgaria (OEL)	(as Mo)
	5 mg/m ³ (TWA)	Czech Republic (OEL)	(as Mo)
	25 mg/m ³ (Ceiling Limit Value)		
	0.5 mg/m ³ (TWA)	Ireland (OEL)	(as Mo)
	1.5 mg/m ³ (respirable dust) (STEL)		
	4 mg/m ³ (TWA) 10 mg/m ³ (STEL)	Poland (OEL)	(as Mo)

Biological Exposure Indices:

No biological exposure limits noted for the ingredient(s).

Derived No Effect Level (DNEL):
No information available.

Predicted No Effect Concentration (PNEC):
No information available.

8.2 Exposure controls

Ventilation and engineering measures

- : Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. 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. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it. 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. See also EN 166.

Other protective equipment

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: 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

9.1 Information on basic physical and chemical properties

Appearance	: Platinum - Semi-Solid
Odour	: Petroleum odour.
Odour threshold	: No information available.
pH	: Not applicable.
Flash point	: > 150°C
Flashpoint (Method)	: Pensky Martens Closed Cup
Lower flammable limit (% by vol.)	: No information available.
Upper flammable limit (% by vol.)	: No information available.
Flammability (solid, gas)	: Not applicable.
Auto-ignition temperature	: No information available.
Decomposition temperature	: No information available.
Oxidizing properties	: None known.
Explosive properties	: Not explosive
Initial boiling point and boiling range	: No information available.
Melting/Freezing point	: No information available.
Relative density	: Relative density: 999 kg/m ³ @ 15.6°C Specific Gravity: 1.0 @ 15.6°C
Solubility in water	: negligible
Other solubility(ies)	: No information available.
Vapour pressure	: No information available.
Vapour density	: > 1 (Air = 1.0)
Partition coefficient: n-octanol/water	: No information available.
Viscosity	: 37 mm ² /sec @ 40°C (Base Oil)
Evaporation rate (BuAe = 1)	: No information available.

9.2 Other Information

Volatiles (% by weight)	: Not applicable.
Volatile organic Compounds (VOC's)	: No information available.
Other physical/chemical comments	: Dropping point: 280°C

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SECTION 10. STABILITY AND REACTIVITY

- 10.1 Reactivity** : Not normally reactive.
- 10.2 Chemical stability** : Stable under normal conditions.
- 10.3 Possibility of hazardous reactions**
: Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use.
- 10.4 Conditions to avoid** : Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Avoid heat and open flame.
- 10.5 Incompatible materials**
: Strong oxidizing agents; Strong reducing agents
- 10.6 Hazardous decomposition products**
: None known.
In the event of fire the following can be released: Carbon oxides; Sulphur oxides; Nitrogen oxides (NOx); Phosphorus oxides; Metal oxides; Other unidentified organic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

- Acute toxicity** : According to the classification criteria of the European Union, this product is not considered as being an acutely toxic chemical.
- Skin corrosion/Irritation** : According to the classification criteria of the European Union, this product is not considered as being a skin corrosive or irritant.
- Serious eye damage/irritation**
: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.
- Respiratory or skin sensitisation**
: According to the classification criteria of the European Union, this product is not considered as being an allergic respiratory sensitiser.
According to the classification criteria of the European Union, this product is not considered as being an allergic skin sensitiser.
- Germ cell mutagenicity** : Contains no ingredient listed as a mutagen.
- Carcinogenicity** : Contains no ingredient listed as a carcinogen.
- Reproductive toxicity** : Contains no ingredient listed as toxic to reproduction.
- STOT-single exposure** : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through a single exposure.
- STOT-repeated exposure** : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through repeated exposures.
- Aspiration hazard** : According to the classification criteria of the European Union, this product is not considered as being an aspiration hazard to humans.
- Toxicological data** : No data is available on the product itself. See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Molybdenum disulphide	> 2.82 mg/L (dust) (No mortality)	> 2000 mg/kg (No mortality)	> 2000 mg/kg (No mortality)

Routes of exposure : Eye contact; Skin contact Ingestion; Inhalation

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Effects of acute exposure : Inhalation: If product is heated, inhalation of fumes may cause irritation to the nose, throat and respiratory tract. May cause coughing and breathing difficulties.
Skin contact: Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.
Eye contact: Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Potential Chronic Health Effects

: Repeated exposure may cause skin dryness or cracking.

Other important hazards : None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity : 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:

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

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

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Molybdenum disulphide	1317-33-5	289.2 mg/L/72hr (Green algae)	No information available.	None.

12.2 Persistence and degradability

: No data is available on the product itself.
Contains the following chemicals which are not readily biodegradable: Molybdenum disulphide.

12.3 Bioaccumulation potential

: No data is available on the product itself.

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

12.5 Results of PBT and vPvB assessment

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- : This mixture contains no substance(s) above reportable levels which are considered to be persistent, bioaccumulating nor toxic (PBT), or very persistent and very bioaccumulating (vPvB).

12.6 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

13.1 Waste Treatment Methods:

- Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8. This material and its container must be disposed of in a safe way.
- Methods of Disposal** : Empty containers may contain hazardous residues. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Dispose of in accordance with the European Directives on waste and hazardous waste. Waste must be classified and labelled prior to recycling or disposal. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14. TRANSPORTATION INFORMATION

<i>Regulatory Information</i>	14.1 UN Number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing Group	<i>Label</i>
ADR/RID	None.	not regulated	not regulated	none	
EU ADR/RID Classification Code	Not applicable.				
EU ADR / RID Hazard Identification Number	Not applicable.				
ADR/RID Additional information	Not classified as dangerous for conveyance in the meaning of the regulations for the transport of dangerous goods by road and rail.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				

- 14.5 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.

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14.6 Special precautions for user

- : Appropriate advice on safety must accompany the package. Keep away from flames and sparks.

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

- : Not applicable.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- : Classification according to Regulation (EC) No. 1272/2008 on the classification of hazardous mixtures.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended:

None of the components are specifically listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended:

None of the components are specifically listed.

Directive 2012/18/EU (Seveso III) on the control of major-accident hazards involving dangerous substances:

None.

Directive 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work:

None of the components are specifically listed.

Directive 94/33/EC on the protection of young people at work:

None of the components are specifically listed.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended [including Regulation (EU) 2015/830].

Follow national regulation for work with chemical agents.

German legislation on water endangering substances VwVwS - Water contaminating class (Germany): 1 (self classified)

15.2 Chemical safety assessment

- : A chemical safety assessment has not been carried out by the Manufacturer of this product.

SECTION 16. OTHER INFORMATION

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Legend : ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS: Chemical Abstract Services
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
EC: European Community
EC50: Effective Concentration 50%
ECHA: European Chemicals Agency
EEC: European Economic Community
EINECS: European Inventory of Existing Commercial chemical Substances
EN: European Standard
EU: European Union
HSDB: Hazardous Substances Data Bank
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
LC: Lethal Concentration
LD: Lethal Dose
NOEC: No observable effect concentration
OECD: Organisation for Economic Co-operation and Development
OEL: National occupational exposure limits
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
RTECS: Registry of Toxic Effects of Chemical Substances
SCBA: Self-Contained Breathing Apparatus
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
WEL: Workplace Exposure Limit

Information Source : 1. Material Safety Data Sheet from manufacturer.
2. Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2019 (Chempendium, RTECs, HSDB, INCHEM).
3. European Chemicals Agency, Classification Legislation, 2019.
4. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2019.

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H-Phrases (Full text)

: Not applicable.

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

Prepared for: King Cycle Group, Inc. DBA Chris King Precision Components 2801 NW Nela Street Portland, Oregon 97210 U.S.A. Telephone: +1 (503) 972-4050 Direct all enquiries to: Chris King Precision Components	
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