



Product Data

Optimol Viscogen® KL

Thermally Stable Synthetic Lubricants

Description

Optimol Viscogen® KL are thermally stable, synthetic lubricants, especially suited for chain lubrication.

Features

- Solid-free.
- Optitec® - Optimol** technology.
- Exceptional adhesion, penetration and load carrying ability.
- Chemically stable in the pH-value range of 2.5 to 10.5.
- Odourless, non-toxic.
- Silicone-free.
- Transparent.
- Compatible with mineral oils.



Deflection Chain Wheels in Car Manufacturer Paint Shop

Benefits

- Is not washed out by water or fruit juices and is resistant to hot water, so periods between relubrication are extended.
- Evaporates at high temperatures with extremely low formation of residues thus extending chain life.
- Excellent corrosion protection, extraordinary aging resistance prolonging investment.
- Thermally stable - depending on viscosity up to 250°C/482°F, allowing one product to cover most operations.
- Does not attract dust or lint allowing chains to run freely.

Applications

Optimol Viscogen® KL is available in 6 different viscosities allowing an extensive choice for differing ambient and operating conditions. The dimensions of the chain as well as its structural shape (e.g. roller, pin, ladder chains, insertion and flat link hoisting chains) are important when selecting the right viscosity. The way the lubricant is applied must also be observed (e.g. manual lubrication, drip feed lubrication, central lubrication, sump lubrication or via spray can).

Optimol Viscogen® KL for all industrial areas e.g. in: high-rack storage shelves, bakery machines, paint lines, conveyor chains, tenter frames and dryers, washing plants, under floor chains, steamers, slashers, baking ovens, slideways, spindles, ropes, open gear wheels, plastic toothed belts, printing machines, wire rotating vats and deep freeze operations.

Castrol Industrial - Australia
Level 6, 636 St Kilda Road, Melbourne 3004
Technical Advice Line 1300 557 998
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Sydney 02 9795 4800
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PLD 1456/00

- Bulk Item Code – 111099 – Optimol Viscogen KL3**
- Bulk Item Code – 113061 – Optimol Viscogen KL9**
- Bulk Item Code – 113065 – Optimol Viscogen KL15**
- Bulk Item Code – 107441 – Optimol Viscogen KL23**
- Bulk Item Code – 112166 – Optimol Viscogen KL130**
- Bulk Item Code – 110826 – Optimol Viscogen KL300**

Recommendations

If lubricant drips off, select next higher viscosity, or reduce the application rate.

Compatible and miscible with mineral oils.

For aerosols, easy and economical use with adjustable spray head. Spraying foam remains until oil has penetrated into friction point.

In spray cans: **Optimol Viscogen® KL3 Spray, Optimol Viscogen® KL 23 Spray, Optimol Viscogen® KL300 Spray.**

Viscogen®KL	Unit	Value						Test Method
		3	9	15	23	130	300	
Article No	-	07201	07203	07205	07207	07209	07211	-
Colour	-	Green						Visual
Base	-	Synthetic oil						-
ISO viscosity group	-	32	100	220	-	1500	-	DIN 51519
Density at + 15°C/+59°F	g/cm ³	0.927	0.964	0.947	0.954	0.933	0.925	DIN 51757
Kin. Viscosity at + 40°C/+104°F	mm ² /s	31.5	99.1	218.8	248.5	1571	4032	DIN 51562
		6.42	12.17	20.07	23.03	96.78	210	
Pour Point	°C	-60	-51	-42	-45	-27	-18	DIN ISO 3016
	°F	-76	-59.8	-43.6	-49	-16.6	-0.4	
Copper corrosion protection At + 100°C/+ 212°F/3h	-	0	1	1	1	1	1	ASTM D-130
Steel corrosion protection	-	0 - A	0 - A	0 - A	0 - A	0 - A	0 - A	DIN 51355
Burning Point	°C	260	280	280	270	230	235	DIN ISO 2592
Ash Content	-	----- None -----						

1 mm²/s = 1 cSt These technical data are based on average test results. Minor deviations may occur from case to case.

Health, Safety and Environment

In line with safe handling practices, it is recommended that the handling instructions outlined in the Castrol Material Safety Data Sheet be followed.

Spillage: Recover free liquid or absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container. Keep product out of streams and waterways by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas.

Disposal: US EPA Hazardous Waste Numbers:
This product as purchased does not fall under current U.S. EPA RCRA definitions of hazardous waste. Under RCRA it is the generator's responsibility to determine the status of the waste at the time of its disposal.
General Disposal Considerations:
Dispose of in accordance with local, state and federal regulations. Disposal of this material to the land may be banned by federal law (40 CFR 268).

All reasonable care has been taken to ensure that the information contained in this publication is accurate as of the date of printing. However, such information may, nevertheless, be affected by changes in the blend formulation occurring subsequent to the date of printing. Material Safety Data Sheets are available for all Castrol Industrial Australia Inc. products. The MSDS must be consulted for appropriate information regarding storage, safe handling and disposal of a product.

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OPTIMOL VISCOGEN KL 9
PLD
MSDS ID: 65009A

A. Chemical Product and Company Identification

Product Name: OPTIMOL VISCOGEN KL 9
General Use: See Product Data Sheet
Product Description: See Product Data Sheet.
MSDS Code: 65009A
Synonyms/Trade Names: Same as product name.

Manufacturer: Castrol Industrial North America Inc.
Address (Line 1): 1001 West 31st Street
Address (Line 2): Downers Grove, IL 60515-1280
Emergency Phone: 1-800-424-9300 (CHEMTREC)

Information Phone: 1-800-621-2661
Regulatory Questions/MSDS Preparation - SHEA Department
Product Chemistry/Application Questions - Technical Support

If available in Canada, this product is supplied by:
Castrol Canada Inc.
3660 Lakeshore Blvd. West
Toronto, Ontario M8W 1P2

Information Phone: 416-252-5511

B. Composition/Information on Ingredients

Ingredient Name	CAS Number	%
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Contains no other ingredients now known to be hazardous as defined by OSHA 9 CFR 1910.1000 (subpart z) and OSHA CFR 29 1910.1200 OR NJ Right-to-Know (NJ C 8:59).

CAS Number	Exposure Guideline
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If applicable, the exposure limits listed are found in the ACGIH TLV guide for TWA unless otherwise noted.

313 Listed Chemicals

If none listed here, or in Section O, there are no 313 chemicals present above threshold value.

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C. Hazards Identification

***** EMERGENCY OVERVIEW *****

Appearance:

Clear, green liquid; mild ester odor

NFPA: Health 1 Flammability 1 Reactivity 0 Special

Potential Health Effects

Eye: May cause eye irritation.

Skin Contact: Prolonged exposure may irritate skin.

Skin Absorption: No acute effects expected.

Ingestion: Oral LD50 not established. Do not ingest.

Inhalation: TLV/PEL for product not established. Refer to Section II for any ingredient TLV's or PEL's. May cause slight irritation of upper respiratory tract.

Chronic Effects: A review of the literature does not show obvious long term hazard.

Carcinogenicity: No component known to be present in this product at >0.1% is presently listed as a carcinogen by IARC, NTP or OSHA, unless otherwise noted in Section P - Other Information.

Routes of Exposure: Skin contact. Eye contact. Inhalation.

D. First Aid Measures

Eye: In case of contact, flush eyes with plenty of water. Get medical attention if irritation persists.

Skin: Wash skin with soap and water. If irritation occurs, get medical attention. Wash clothing before reuse.

Ingestion: If swallowed, call a physician immediately. Only induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person.

Inhalation: If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

E. Fire Fighting Measures

Flammable Properties

Flash Point (degrees F/C): 500°F / 260°C Method: (COC) ISO 2592

Upper Flammable Limit: Not available

Lower Flammable Limit: Not available

Autoignition Temperature: Not determined

Hazardous Products of Combustion: Potential combustion products are oxides of C, N, sulfur and phosphorus.

Properties That Could Increase Fire or Explosion Hazard: Overheated container may rupture. Irritating or toxic vapors such as carbon monoxide result from combustion.

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E. Fire Fighting Measures (Cont.)

Extinguishing Media: Water fog, dry chemical, foam or CO2.

Fire Fighting Instructions: Water or foam may cause frothing. Use water to keep fire exposed container cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use self-contained breathing apparatus. Prevent runoff from fire control or dilution from entering streams or drinking water supply.

F. Accidental Release Measures

Recover free liquid or absorb spill with inert material (e.g. dry sand or earth), then place in chemical waste container. Keep product out of streams and waterways by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas.

G. Handling and Storage

Wash contaminated clothing before reuse. Do not take internally. Avoid contact with skin and eyes. Keep containers closed when not in use. Store in cool dry place. Bring product to room temperature prior to use.

H. Exposure Controls/Personal Protection

Personal Protective Equipment (PPE)

Eye/Face Protection: Safety glasses with side shield or chemical goggles.

Skin Protection: Chemical resistant gloves should be used when handling this product.

Respiratory Protection: Good industrial hygiene practices recommend that engineering controls be used to reduce environmental concentrations to the threshold limit value (TLV) or permissible exposure limit (PEL), if applicable. If any associated TLV or PEL is exceeded, provide NIOSH approved respiratory protection.

Other: Eyewash facility. Oil-impervious (e.g. neoprene) clothing to avoid skin contact.

Exposure Guidelines: See information provided in Section B, Ingredients.

I. Physical and Chemical Properties

Appearance/Odor:

Clear, green liquid; mild ester odor

pH (conc): NA

pH at :NA

Vapor Pressure (mm Hg): Not determined

Vapor Density (Air = 1): Not determined

Boiling Point (degrees F/C): Not known / Not known

Freezing Point (degrees F/C): not determined

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Replaces 4/16/99

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As of 3/20/03

I. Physical and Chemical Properties (Cont.)

Melting Point (degrees F/C): Not known / Not known
Solubility in Water: Insoluble
Specific Gravity at 60 degrees F (H2O = 1): 0.9640 +/- .005
Density: Not calculated
Softening Point (degrees F): Not determined
Evaporation Rate (n-Butyl Acetate = 1): Not determined
Viscosity: Not available
Bulk Density: Not determined
% Volatile: <1
VOC: 0.0100 lbs/gallon Method: Not Tested
Octanol/Water Partition Coefficient: Not determined
Saturated Vapor Concentration: Not determined
Molecular Weight: Not applicable

J. Stability and Reactivity

Chemical Stability: Stable under normal conditions.
Conditions To Avoid: None known.
Incompatibility With Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Potential combustion products are oxides of C, N, sulfur and phosphorus.

K. Toxicological Information

Eye Effects: May cause eye irritation.
Skin Effects, Contact: Prolonged exposure may irritate skin.
Skin Effects, Absorption: No acute effects expected.
Acute Oral Effects (Ingestion): Oral LD50 not established. Do not ingest.
Acute Inhalation Effects: TLV/PEL for product not established. Refer to Section II for any ingredient TLV's or PEL's. May cause slight irritation of upper respiratory tract.
Chronic Effects: A review of the literature does not show obvious long term hazard.
Carcinogenicity: No component known to be present in this product at >0.1% is presently listed as a carcinogen by IARC, NTP or OSHA, unless otherwise noted in Section P - Other Information.

L. Ecological Information

Ecotoxicological Information: No specific ecological data available for this product.

M. Disposal Considerations

US EPA Hazardous Waste Numbers:

This product as purchased does not fall under current U.S. EPA RCRA definitions of hazardous waste. Under RCRA it is the generator's responsibility to determine the status of the waste at the time of its disposal.

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M. Disposal Considerations (Cont.)

General Disposal Considerations:

Dispose of in accordance with local, state and federal regulations.
Disposal of this material to the land may be banned by federal law (40 CFR 268).

CERCLA Reportable Quantity: This product does not contain any CERCLA regulated materials.

N. Transport Information

Hazardous Materials Description/Proper Shipping Name:

Not Regulated.

Hazard Class: Same As Above

Identification Number (UN or NA Number): Same As Above

Packing Group: Same As Above

Freight Class:

NMFC 155250, PETROLEUM OILS, GREASES & RELATED PRODUCTS, NOI CLASS 65.

Telephone Number for Transport Instructions: 1-800-621-2661, SHEA Department

O. Regulatory Information

U.S. Federal Regulations:

Hazardous per OSHA 29 CFR 1910.1200: Yes

CERCLA/EPCRA:

Section 302 Extremely Hazardous Substances (EHS):

No listed ingredients are present on the 302 list.

Section 311/312 Hazard Class(es): Immediate: YES Delayed: NO

Fire: NO Reactivity: NO Sudden Release of Pressure: NO

Section 313 Toxic Chemicals:

If none listed here or in Section B, there are no 313 chemicals present above threshold value.

Other U.S. Federal Regulations: This product is a mixture and is NOT listed in the TSCA inventory. The individual ingredients in the product ARE listed in the TSCA inventory.

International Regulations: One or more of the materials contained in this product does not appear on the Canadian Domestic Substances List (DSL).

This product is non-controlled under W.H.M.I.S.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the informati

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Replaces 4/16/99

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O. Regulatory Information (Cont.)

on required by the Controlled Products Regulations for those regulated products.

P. Other Information

No component known to be present in this product at >0.1% is presently listed as a carcinogen by IARC, NTP or OSHA.

Q. Disclaimer

Information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or the use of any product in violation of any patent, or in violation of any law or or regulation. It is the user's responsibility to determine the suitability of any material for a specific purpose, and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, must necessarily disclaim all liability with respect to the use of any material supplied by us.