



Handi
Quilter®

Designed by a Quilter, for Quilters.®

Lube Kit

Part # QM49262

HQ¹⁸
Avanté

HQ²⁴
Fusion

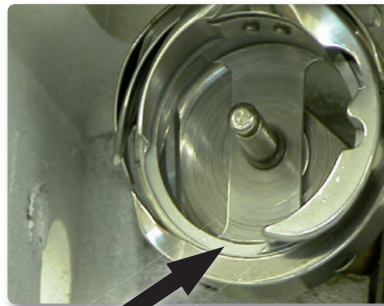
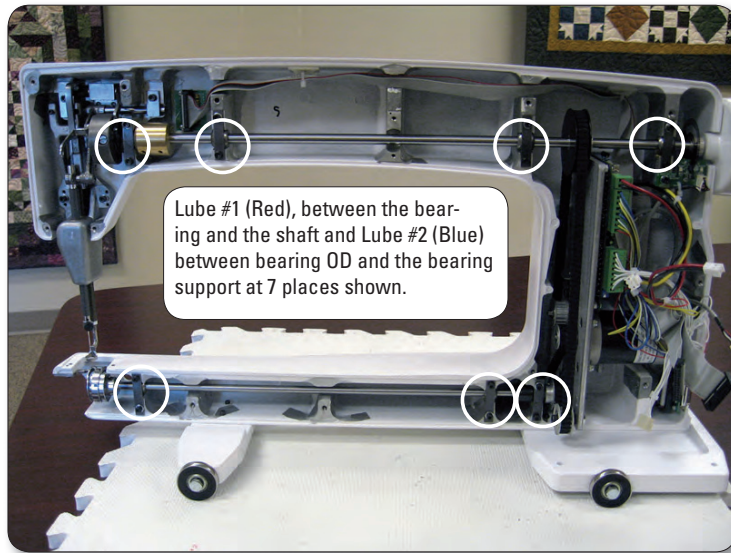
HQ Sixteen
Sit-down

HQ Sixteen

HQ¹⁸ Avanti

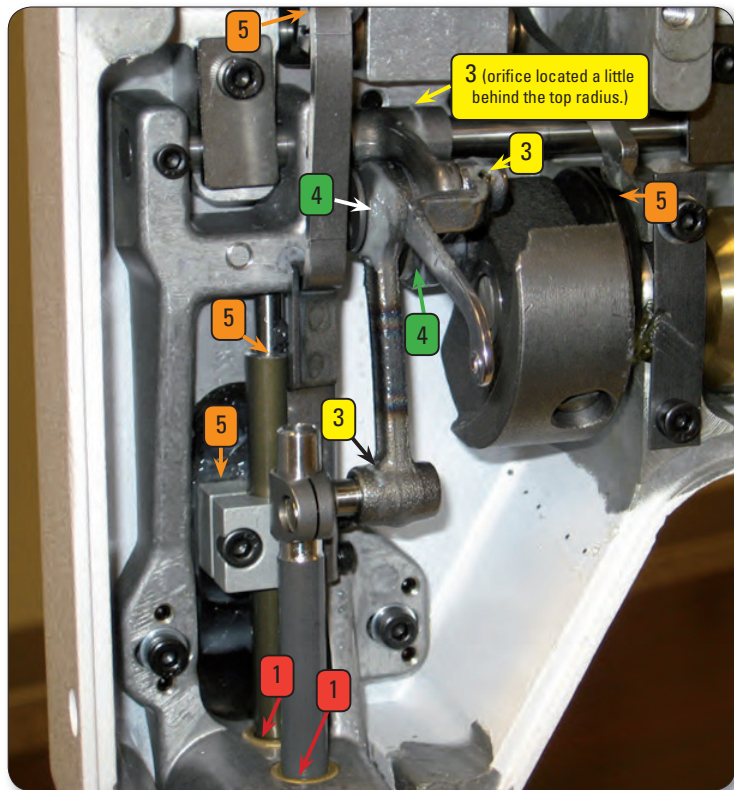
Lubrication Instructions

HQ¹⁸ Avanté Lubrication



Apply one drop of Lube #6 (Purple), to the raceway of the bobbin case support two to three times per day. This application is based upon sewing for 8 hours of machine time. If the machine is used less, lubricate the hook less frequently. After the lubrication of the hook, it is recommended that one momentarily sew on scrap material before resuming the sewing of the quilt. Failure to do so may result in oil stains on the quilt.

HQ¹⁸ Avanté Lubrication - Continued



#1 (Red) OY 68
One drop on the side of the needle and presser bars.
(2 places)

#3 (Yellow) GLY 2100
One drop per orifice, articulating link, take-up lever and needle bar driver
(3 places)

#4 (Green) IsoFlex NCA-15
Inside caged needle bearings
(2 places)

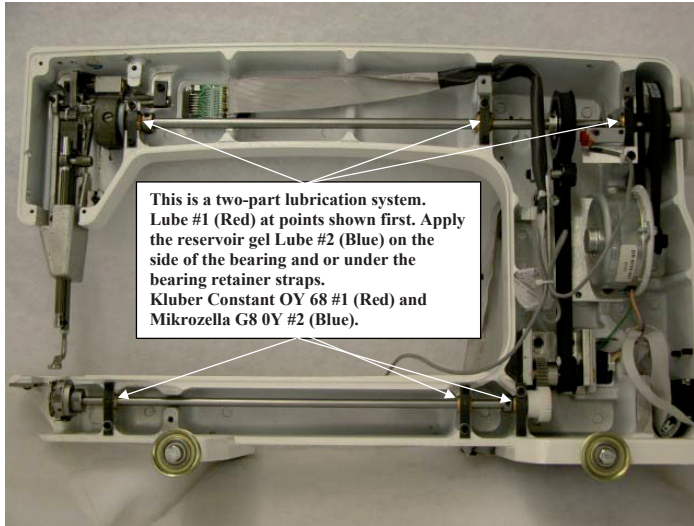
#5 (Orange) GLY 151
Add grease sparingly to the presser-bar slide and plunger. Add a small amount between the stylus and cams of both the presser-bar lifting link and the hopping-mechanism lifting arm.
(4 places)

HQ Sixteen Lubrication Instructions

Lubrication

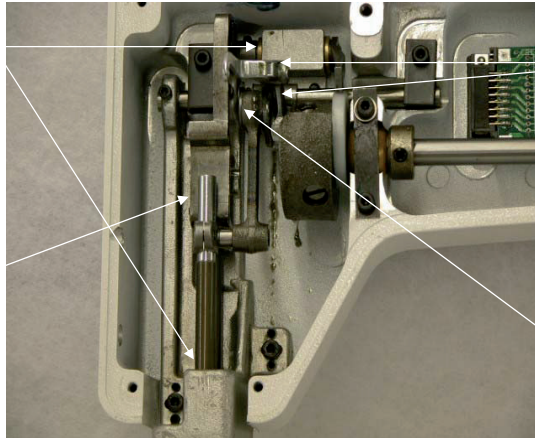
Lube Kit Part# 388-000-004

The HQ Sixteen lubricating schedule should be followed every year up to every two years to insure top mechanical performance.



Lube #1
(Red)
Kluber
Constant OY
68, the needle
bar and
hopping
mechanism.

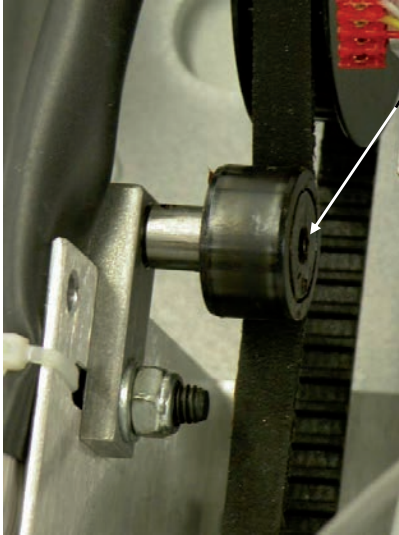
Lube #5
(Orange)
Kluber GLY
151, the
presser bar
guide clamp
and wear
plate.



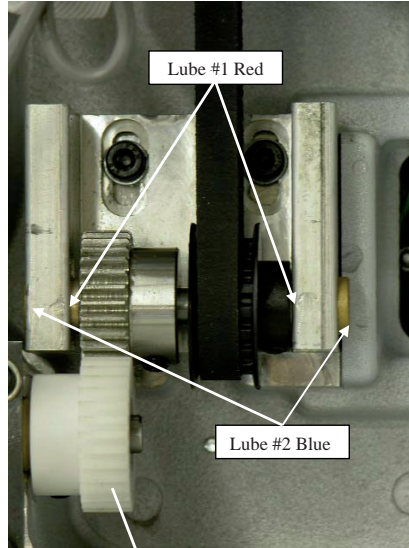
Lube #3
(Yellow)
Kluber GLY,
2100 the take-
up and
articulating
links of the
take-up lever.

Lube #4 (Green)
Kluber Isoflex
NCA-15, the take-
up caged needle
bearings, 2 places.

Lube #4 (Green)
Kluber Isoflex NCA-15, the belt idler wheel
needle bearings.



Lube #1 (Red) Kluber Constant OY 68,
the transmission shaft bearings followed
by **Lube #2 (Blue) Mikrozella G8 0Y,** as
before stated.



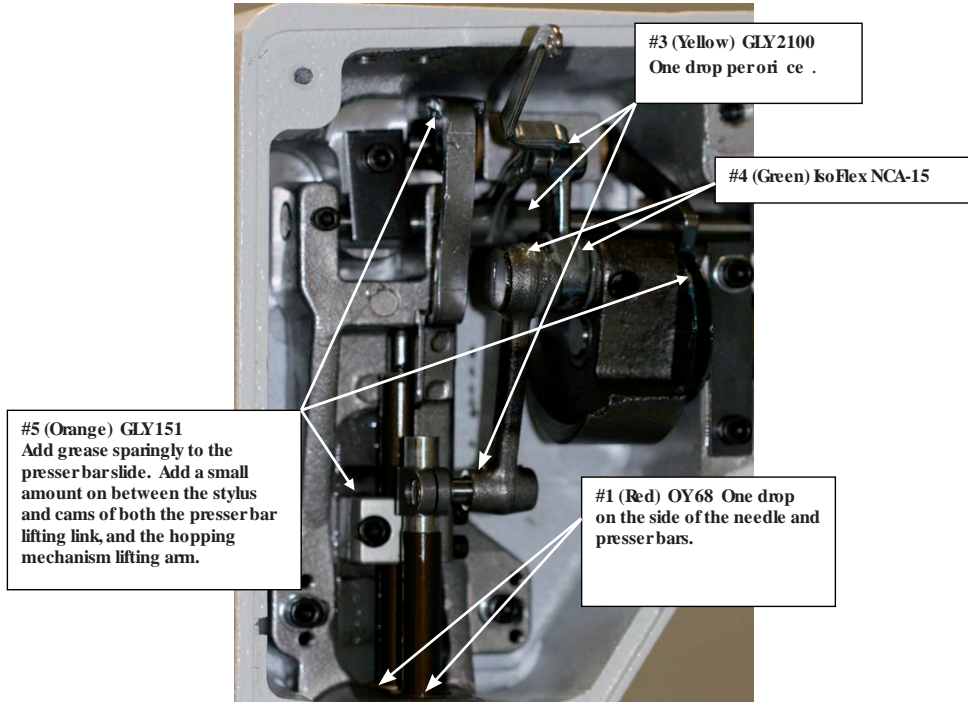
Apply Lube #5 (Orange) Kluber
GLY 151 on the Delrin gear to
provide a dampening lubricant for
noise reduction.



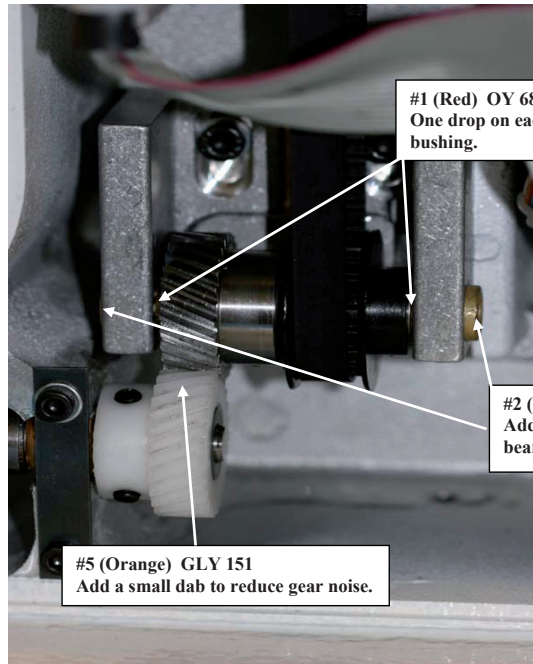
**Apply one drop of Lube #6 (Purple), to the raceway of the bobbin
case support two to three times per day. This application is
based upon sewing for 8 hours of machine time. If the machine is
used less, lubricate the hook less frequently. After the lubrication
of the hook, it is recommended that one momentarily sew on
scrap material before resuming the sewing of the quilt. Failure to
do so may result in oil stains on the quilt piece.**

Lubrication Chart for HQ Sixteen (2005 Improved Version)

Several improvements were made to the HQ Sixteen machine in 2005. Some of the improvements are the introduction of a new head-frame, presser bar guide, and transmission gearing. Please observe the lubrication instructions for these new features. All other lubrication in the previous lubrication chart should be observed as noted.



Kuber Lubricants		
(RED) OY68 R	Replacement Lube	# 1 Red: 388.001.004
(BLUE) Mikrozeila G8 OY	Replacement Lube	#2 Blue: 388.002.004
(YELLOW) GLY 2100	Replacement Lube	#3 Yellow: 388.003.004
(GREEN) IsoFlex NCA-15	Replacement Lube	#4 Green: 388.004.004
(ORANGE) GLY 151	Replacement Lube	#5 Orange: 388.005.004
(PURPLE) Texaco 22, hook race only	Replacement Lube	#6 Purple: 388.006.004



#1 (Red) OY 68
One drop on each bearing bushing.

#2 (Blue) Mikrozella G8 0Y
Add a dab to the end of each bearing bushing.

#5 (Orange) GLY 151
Add a small dab to reduce gear noise.

HQ²⁴ Fusion Lubrication Instructions

Lubrication Specifications

Rep Lube Kit Part# QM49262

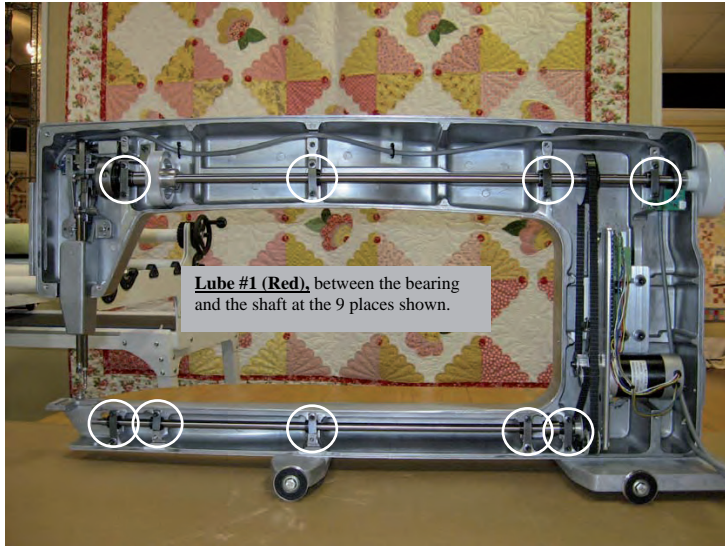
<u>Lubricant type</u>		<u>Machine Components</u>
#1. Kluber, Constant OY68	(Red)	All main bearings
#2 Kluber, Mikrozeella G 8 OY	(Blue)	<i><u>Not used on HO Fusion Machine</u></i>
#3. Kluber, GLY 2100	(Yellow)	Take-up lever, articulating link, and needle bar driver
#4. Kluber, NCA 15, Isoflex	(Green)	Take-up caged needle bearings
#5. Kluber, GLY 151, Polylub	(Orange)	Presser bar guide and plunger, lifting link, and pitman eccentric
#6. Conoco, Hydroclear R&O 32 or similar white oil, i.e. Texaco 22, or Velocite 10	(Purple)	Hook race

HQ Lubricant Order Numbers

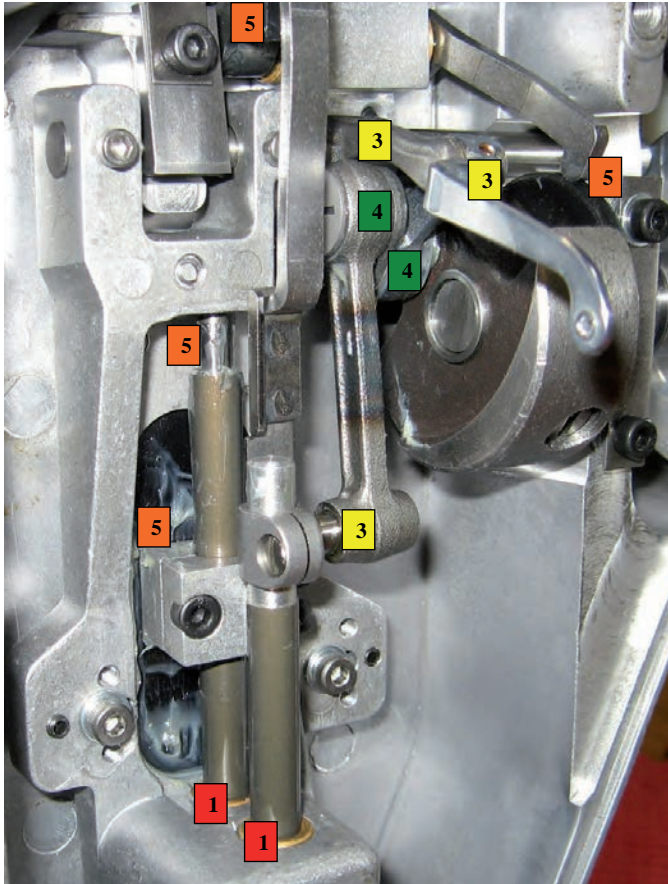
#1 Red	OY 68	Replacement Lube	#1 Red:	QM49301
#2 Blue	Mikrozeella G 8 OY	Replacement Lube	#2 Blue:	QM49302
#3 Yellow	GLY 2100	Replacement Lube	#3 Yellow:	QM49303
#4 Green	IsoFlex NCA-15	Replacement Lube	#4 Green:	QM49304
#5 Orange	GLY 151	Replacement Lube	#5 Orange:	QM49305
#6 Purple	Texaco 22, hook race only	Replacement Lube	#6 Purple:	QM49306
All the above in box w/ booklet		Rep Lube Kit Box	#1-#6 Kit	QM49262

The HO Fusion lubricating schedule should be followed every year up to every two years to insure top mechanical performance.

The HO Fusion lubricating schedule should be followed every year up to every two years to insure top mechanical performance.



Apply one drop of **Lube #6 (Purple)**, to the raceway of the bobbin case support two to three times per day. This application is based upon sewing for 8 hours of machine time. If the machine is used less, lubricate the hook less frequently. After the lubrication of the hook, it is recommended that one momentarily sew on scrap material before resuming the sewing of the quilt. Failure to do so may result in oil stains on the quilt piece.



#1 (Red) OY 68 One drop on the side of the needle and presser bars.
(2 places)

#3 (Yellow) GLY 2100
One drop per orifice, articulating link, take up lever, and needle bar driver **(3 places)**

#4 (Green) IsoFlex NCA-15,
inside caged needle bearings **(2 places)**

#5 (Orange) GLY 151
Add grease sparingly to the presser bar slide and plunger. Add a small amount between the stylus and cams of both the presser bar lifting link, and the hopping mechanism lifting arm. **(4 places)**

HQ Lubrication Specifications

Rep Lube Kit Part# QM49262

Lubricant Type

- #1. Kluber, Constant OY68 (Red)
- #2 Kluber, Mikrozella G 8 OY (Blue)
- #3. Kluber, GLY 2100 (Yellow)

- #4. Kluber, NCA 15, Isoflex (Green)
- #5. Kluber, GLY 151, Polylub (Orange)

- #6. Conoco, Hydroclear R&O 32 (Purple)
or similar white oil, i.e.
Texaco 22, or Velocite 10

Machine Components

- All main bearings
- Main bearing reservoirs
- Take-up lever, articulating link and
needle bar driver
- Take-up caged needle bearings
- Presser bar guide and plunger, lifting link and
Pitman eccentric
- Hook race

HQ Lubricant Order Numbers

#1 Red OY 68	Replacement Lube	#1 Red: QM49301
#2 Blue Mikrozella G 8 OY	Replacement Lube	#2 Blue: QM49302
#3 Yellow GLY 2100	Replacement Lube	#3 Yellow: QM49303
#4 Green IsoFlex NCA-15	Replacement Lube	#4 Green: QM49304
#5 Orange GLY 151	Replacement Lube	#5 Orange: QM49305
#6 Purple Texaco 22, hook race only	Replacement Lube	#6 Purple: QM49306
All the above in box w/ booklet	Rep Lube Kit Box	#1-#6 Kit QM49262

HQ Lubricating Schedule

The HQ Quilting machine lubricating schedule should be followed every year up to every two years to ensure top mechanical performance, based on usage.

Material Safety Data Sheets



Material Safety Data Sheet

Product name: **CONSTANT OY 68 (#028062)**

Date: June 9, 2003

Replaces: February 1999

Page: 1 of 3

Section 1 - Product and Company Identification

Company: Klüber Lubrication North America L.P. Emergency telephone #: 1-800-424-9300 (Chemtec)
32 Industrial Dr. Phone: (603) 647-4104
Londonderry, N.H. 03053 Fax: (603) 647-4105

Product Use: Lubricating oil for sintered metal bearings

Section 2 - Composition/Information on Ingredients

Ingredient	TLV	PEL
Synthetic Hydrocarbon Oil	N/Ap	N/Ap
Special Additives	N/Ap	N/Ap

Section 3 - Hazards Identification

Eye Contact: May cause mild irritation upon immediate contact.

Skin contact: Prolonged or repeated contact may cause the removal of skin oils, possibly leading to irritation or dermatitis.

Inhalation: Vapor inhalation under ambient conditions will not occur. The inhalation of vapors (generated at extremely high temperature only) or mist may cause a mild irritation of the mucous membranes of the upper respiratory tract. Harmful concentrations of mists and/or vapors are unlikely to occur through reasonable and customary use of this product.

Ingestion: No acute or chronic effects expected. However, minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury.

Section 4 - Emergency and First Aid Procedures

After contact with eyes: Flush eyes with plenty of water for 15 minutes. If irritation persists, or if an infection develops, seek medical attention.

After contact with skin: Wash off with soap and plenty of water. Apply skin cream if necessary. Seek medical attention if irritation or infection occurs. Remove contaminated clothing and wash before reuse.

After inhalation: If overcome by product vapor heated to extreme temperatures, immediately move from exposure and get medical attention. If breathing is irregular, start resuscitation or administer oxygen if available. If overexposed to mist, remove from further exposure until excessive mist condition subsides.

After ingestion: If large amounts are swallowed, do not induce vomiting. Get medical attention.

Advice to doctor: Treat symptomatically.

Section 5 - Exposure Controls

Eye protection: Wear safety goggles if splashes may occur. Do not wear contact lenses when using chemicals.

Hand protection: Wear chemical resistant gloves.

Body protection: Wear clean, body-covering clothing to minimize dermal exposure.

Ventilation: Under normal conditions of use, no special ventilation is required. However, if vaporized or misted, use local exhaust if possible.

Respiratory protection: No special respiratory protection is required. However, if product is overheated beyond conditions of normal use, or misted, wear the appropriate NIOSH-approved respiratory protection.

Other protection measures: Safety showers, eye wash fountains, and washing facilities should be readily available.



Material Safety Data Sheet

Product name: **CONSTANT OY 68 (#028062)**

Date: June 9, 2003

Replaces: February 1999

Page: 2 of 3

Section 6 - Fire Fighting Measures

Flash point: ~ 220°C

Method: ASTM D 92

Lower explosion limit: N/Av

Upper explosion limit: N/Av

Extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO₂)

Unusual fire and explosion hazards: Empty metal containers retain product residue. Do not pressurize, cut, weld, drill, solder or expose container to heat, flame, sparks, or other sources of ignition: it may explode, causing serious injury or death. Exposure to heat builds up pressure in container. Cool with water spray.

Special fire Fighting Procedures: If leak or spill has not ignited, use water spray to disperse any vapor and to flush spills away from ignition sources. Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Do not use direct stream of water, material may float and re-ignite.

Section 7 - Accidental Release Measures

If product leaks or is inadvertently spilled, eliminate ignition sources isolate surrounding spill area with the proper containment system to prevent the spill from reaching waterways. Add absorbent and soak up the product. Collect product and absorbent, place in a chemical waste container for proper disposal.

Section 8 - Handling and Storage

Avoid contact with skin and remove soiled or soaked clothing. Wash hands with soap and water before eating, drinking, and/or smoking. Clean skin thoroughly after work and if necessary, apply skin cream.

Store product under normal temperature and pressure.

Store product away from heat sources and food products.

Section 9 - Physical and Chemical Properties

Boiling Point: > 316 °C

Pour Point: N/Av

Vapor Pressure (mm Hg.): < 0.1

Vapor Density (Air = 1): N/Av

Solubility in Water: Insoluble

Specific gravity (H₂O = 1): 0.83

Evaporation rate (ether = 1): N/Av

Appearance and odor: Yellowish liquid with a neutral odor.

Section 10 - Stability and Reactivity

Stability: Stable

Conditions to avoid: Open flames and other sources of heat

Materials to avoid: Strong oxidizing agents such as pure oxygen

Hazardous decomposition products: Fumes, smoke, carbon monoxide and carbon dioxide.

Hazardous polymerization: Will not occur.

Section 11 - Toxicological Information

The information herein is given in good faith, but without warranty, express or implied. All risks of use of the product are therefore assumed by the user. Appropriate warnings and safe handling procedures must be provided to handlers and users.



Material Safety Data Sheet

Product name: **CONSTANT OY 68 (#028062)**

Date: June 9, 2003

Replaces: February 1999

Page: 3 of 3

Acute toxicity: N/Av for this product.

Chronic toxicity: N/Av for this product.

Section 12- Disposal Considerations

Under RCRA, it is the user's responsibility to determine, at the time of disposal, whether the product meets any of the criteria for a hazardous waste defined in 40 CFR 261. As a new product it would not be considered RCRA hazardous waste.

Section 13- Transportation Information

Proper Shipping Name	Hazard Class or Division	UN ID	Packing Group
N/Av			

Section 14 – Regulatory Information

All product components comply with all applicable rules and orders under the Toxic Substance Control Act (TSCA).

Section 15 - Additional Information

HMIS Rating: Health -1 Flammability - 1 Reactivity - 0 Personal Protection - B

Unk. = Unknown N/Av = Not Applicable N/Av = Not Available ~ = Approximately



Material Safety Data Sheet

Product name: **MIKROZELLA G 8 OY (# 088006)**

Date: March 11, 2003

Replaces: October 9, 2002

Page: 1 of 3

Section 1 - Product and Company Identification

Company: Klüber Lubrication North America L.P.
32 Industrial Drive
Londonderry, N.H. 03053
Phone: (603)647-4104
Fax: (603)647-4105

Emergency telephone no.: 1-800-424-9300 (Chemtrec)

Product Use: Lubricating grease.

Section 2 - Composition/Information on Ingredients

Ingredient	TLV	PEL
Synthetic hydrocarbon oil	N/Ap	N/Ap
Silicate	3 mg/m ³ (PNOC)	5 mg/m ³

Section 3 - Hazards Identification

Eye Contact: May cause mild irritation upon immediate contact.

Skin contact: Prolonged or repeated contact may cause the removal of skin oils, possibly leading to irritation or dermatitis.

Inhalation: Not applicable under conditions of normal use. However, if product is heated beyond conditions of normal use, it may create a hazardous environment.

Ingestion: No acute or chronic effects expected. If swallowed, may cause irritation of the digestive tract.

Section 4 - Emergency and First Aid Procedures

After contact with eyes: Flush eyes with plenty of water for 15 minutes. If irritation persists, or if an infection develops, seek medical attention.

After contact with skin: Wash off with soap and plenty of water. Apply skin cream if necessary. Seek medical attention if irritation or infection occurs. Remove contaminated clothing and wash before reuse.

After inhalation: Not applicable under normal conditions of use. If product is heated beyond intended use and overexposure results, remove victim to fresh air. Seek medical attention if necessary.

After ingestion: If large amounts are swallowed, do not induce vomiting. Get medical attention.

Advice to doctor: Treat symptomatically.

Section 5 - Exposure Controls

Eye protection: Wear safety glasses. Do not wear contact lenses when working with chemicals.

Hand protection: Wear chemical resistant gloves.

Body protection: Wear clean, body-covering clothing to minimize dermal exposure.

Ventilation: Under normal conditions of use, no special ventilation is required. If product will be heated beyond conditions of normal use, use local ventilation.

Respiratory protection: No special respiratory protection is required. However, if product is overheated beyond conditions of normal use, wear the appropriate NIOSH-approved respiratory protection.

Other protection measures: Safety showers, eye wash fountains, and washing facilities should be readily available.

Section 6 - Fire Fighting Measures

Flash point: N/Ap

Lower explosion limit: N/Ap

Upper explosion limit: N/Ap

Extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO₂)



Material Safety Data Sheet

Product name: **MIKROZELLA G 8 OY (# 088006)**

Date: March 11, 2003

Replaces: October 9, 2002

Page: 2 of 3

Unusual fire and explosion hazards: Empty metal containers retain product residue. Do not pressurize, cut, weld, drill, solder or expose container to heat, flame, sparks, or other sources of ignition: it may explode, causing serious injury or death.

Special fire Fighting Procedures: Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Cool fire exposed areas and equipment.

Section 7 - Accidental Release Measures

If product leaks or is inadvertently spilled, remove ignition sources and isolate surrounding spill area with the proper containment system to prevent the spill from reaching waterways. Add absorbent and soak up the product. Collect product and absorbent, place in a chemical waste container for proper disposal.

Section 8 - Handling and Storage

Avoid contact with skin and remove soiled or soaked clothing. Wash hands with soap and water before eating, drinking, and/or smoking. Clean skin thoroughly after work and if necessary, apply skin cream.

Store product under normal temperature and pressure.

Store product away from heat sources and food products.

Section 9 - Physical and Chemical Properties

Drop Point: N/Av

Vapor Pressure (mm Hg.): N/Av

Vapor Density (Air = 1): N/Av

Solubility in Water: Insoluble

Specific Gravity: 0.87 @ 20°C

Evaporation rate (ether = 1): N/Av

Appearance and odor: Light brown grease with a neutral odor.

Section 10 - Stability and Reactivity

Stability: Stable

Conditions to avoid: Open flames and other sources of heat

Materials to avoid: Strong oxidizing agents such as pure oxygen

Hazardous decomposition products: Thermal decomposition and burning may produce fumes, smoke, carbon monoxide and carbon dioxide.

Hazardous polymerization: Will not occur



Material Safety Data Sheet

Product name: **MIKROZELLA G 8 OY (# 088006)**

Date: March 11, 2003

Replaces: October 9, 2002

Page: 3 of 3

Section 11 - Toxicological Information

Acute toxicity: N/Av for this product.

Chronic toxicity: N/Av for this product.

Section 12- Disposal Considerations

This product should not be released to water. Under RCRA, it is the user's responsibility to determine, at the time of disposal, whether the product meets any of the criteria for a hazardous waste defined in 40 CFR 261. As a new product it would not be considered RCRA hazardous waste.

Section 13- Transportation Information

Proper Shipping Name	Hazard Class or Division	UN ID	Packing Group
N/Av			

Section 14 – Regulatory Information

All product components comply with all applicable rules and orders under the Toxic Substance Control Act (TSCA).

The silicate in this product is a NIOSH group II pesticide, is an IARC class III carcinogen (not classifiable as a human carcinogen), is on the Canadian NPRI, the WHMIS Ingredient Disclosure list and is regulated by California, Illinois, Indiana, Kentucky, Massachusetts, Minnesota, New Jersey, North Carolina, Pennsylvania and Rhode Island.

Section 15 - Additional Information

HMIS Rating: Health -1 Flammability - 1 Reactivity - 0 Personal Protection - B

Unk. = Unknown N/Av = Not Applicable N/A = Not Available ~ = Approximately



Material Safety Data Sheet

Product name: **CONSTANT GLY 2100 (#028049)**

Date: March 10, 2003

Replaces: June 1999

Page: 1 of 3

Section I

Company: Klüber Lubrication North America L.P.
32 Industrial Drive
Londonderry, N.H. 03053
Phone: (603)647-4104

Fax: (603)647-4105

Emergency telephone no.: 1-800-424-9300 Chemtrec

Product Use: Lubricating oil

Section II - Hazardous Ingredients

Hazardous ingredients	CAS no.	wt.%	ACGIH TLV	NIOSH REL	OSHA PEL	Mfr. Rec.
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This product is not known to contain any hazardous ingredients in concentrations in excess of 1.0%, nor carcinogens in excess of 0.1% as defined in 29 CFR 1910.1200.

Section III - Other Ingredients (Trade Secret)

Ingredients	CAS no.	wt.%	ACGIH TLV	NIOSH REL	OSHA PEL	Mfr. Rec.
Synthetic hydrocarbon oil	Proprietary	Prop.	N/Ap	N/Ap	N/Ap	N/Ap
Lithium soap	Proprietary	Prop.	N/Ap	N/Ap	N/Ap	N/Ap

Section IV - Physical Data

Vapor pressure: N/Av

Solubility in water: insoluble

Density: approx. 0,84 g/cm³, 20°C DIN 51757

Appearance and odor: Light brown, viscous liquid with a characteristic odor

Section V - Fire and Explosion Hazard Data

Flash point: > 200°C DIN ISO 2592

Lower explosion limit: N/Ap

Upper explosion limit: N/Ap

Extinguishing media: Water fog, foam, dry powder, carbon dioxide (CO₂)

Unusual fire and explosion hazards: Empty metal containers retain product residue. Do not pressurize, cut, weld, drill, solder or expose container to heat, flame, sparks, or other sources of ignition: it may explode, causing serious injury or death.

Special fire Fighting Procedures: Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Cool fire exposed areas and equipment.

Section VI - Reactivity Data

Stability: Stable

Conditions to avoid: Open flames and other sources of heat.

Materials to avoid: strong oxidizing agents, such as pure oxygen



Material Safety Data Sheet

Product name: **CONSTANT GLY 2100 (#028049)**

Date: March 10, 2003

Replaces: June 1999

Page: 2 of 3

Hazardous decomposition products: Fumes, smoke, carbon monoxide and carbon dioxide.

Hazardous polymerization: Will not occur

Section VII - Health Hazard Data

Toxicological literature data from products of similar composition indicate an acute toxicity (LD₅₀/oral/rat) of > 2 g/kg and no chronic toxicity.

Eye Contact: May cause mild irritation on direct contact.

Skin contact: Prolonged or repeated contact may cause the removal of skin oils, possibly leading to irritation and/or dermatitis.

Inhalation: Vapor pressure is very low. Vapor inhalation under ambient conditions will not occur. The inhalation of vapors (generated at extremely high temperature only) or oil mist may cause a mild irritation of the mucous membranes of the upper respiratory tract.

Ingestion: No acute or chronic effects expected. However, minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury.

Section VIII - Emergency and First Aid Procedures

After inhalation: If overcome by product vapor heated to extreme temperatures, immediately move from exposure and get medical attention. If breathing is irregular, start resuscitation or administer oxygen if available. If overexposed to oil mist, remove from further exposure until excessive oil mist condition subsides.

After contact with skin: Wash off with soap and plenty of water. Apply skin cream if necessary. Remove contaminated clothing.

After contact with eyes: Flush eyes with plenty of water for 15 minutes. If irritation persists, or if an infection develops, seek medical attention.

After ingestion: Do not induce vomiting. Obtain medical attention.

Advice to doctor: Treat symptomatically.

Section IX - Special Protection Information

Respiratory protection: No special respiratory protection is required. However, if product is overheated beyond conditions of normal use, or misted, wear the appropriate NIOSH-approved respiratory protection.

Hand protection: Wear impervious gloves.

Eye protection: Wear safety goggles. Do not wear contact lenses when working with chemicals.

The information herein is given in good faith, but without warranty, express or implied. All risks of use of the product are therefore assumed by the user. Appropriate warnings and safe handling procedures must be provided to handlers and users.



Material Safety Data Sheet

Product name: **ISOFLEX NCA 15 (# 004180)**

Date: March 14, 2003

Replaces: May 2001

Page: 1 of 3

Section 1 - Product and Company Identification

Company: Klüber Lubrication North America L.P.

32 Industrial Drive

Londonderry, N.H. 03053

Phone: (603)647-4104

Fax: (603)647-4105

Emergency telephone no.: 1-800-424-9300 (Chemtrec)

Product Use: Lubricating grease

Section 2 - Composition/Information on Ingredients

Ingredient	TLV	PEL
Mineral oil	5 mg/m ³ (Oil mist)	5 mg/m ³ (Oil mist)
Calcium complex soap	N/Ap	N/Ap
Ester Oil	N/Ap	N/Ap
Synthetic hydrocarbon oil	N/Ap	N/Ap

Section 3 - Hazards Identification

Eye Contact: May cause mild irritation upon immediate contact.

Skin contact: Prolonged or repeated contact may cause the removal of skin oils, possibly leading to irritation or dermatitis.

Inhalation: Not applicable under conditions of normal use. However, if product is heated beyond conditions of normal use, it may create a hazardous environment.

Ingestion: No acute or chronic effects expected. If swallowed, may cause irritation of the digestive tract.

Section 4 - Emergency and First Aid Procedures

After contact with eyes: Flush eyes with plenty of water for 5 minutes. If irritation persists, or if an infection develops, seek medical attention.

After contact with skin: Wash off with soap and plenty of water. Apply skin cream if necessary. Seek medical attention if irritation or infection occurs. Remove contaminated clothing and wash before reuse.

After inhalation: Not applicable under normal conditions of use. If product is heated beyond intended use and overexposure results, remove victim to fresh air. Seek medical attention if necessary.

After ingestion: If large amounts are swallowed, do not induce vomiting. Seek medical attention.

Advice to doctor: Treat symptomatically.

Section 5 - Exposure Controls

Eye protection: Wear safety glasses. Do not wear contact lenses when working with chemicals.

Hand protection: Wear chemical-resistant gloves.

Body protection: Wear clean, body-covering clothing to minimize dermal exposure.

Ventilation: Under normal conditions of use, no special ventilation is required. If product will be heated beyond conditions of normal use, use local ventilation.

Respiratory protection: No special respiratory protection is required. However, if product is overheated beyond conditions of normal use, wear the appropriate NIOSH-approved respiratory protection.

Other protection measures: Safety showers, eye wash fountains, and washing facilities should be readily available.



Material Safety Data Sheet

Product name: **ISOFLEX NCA 15 (# 004180)**

Date: March 14, 2003

Replaces: May 2001

Page: 2 of 3

Section 6 - Fire Fighting Measures

Flash point: > 200°C (Base Oil)

Lower explosion limit: N/Ap

Upper explosion limit: N/Ap

Extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO₂)

Unusual fire and explosion hazards: Empty metal containers retain product residue. Do not pressurize, cut, weld, drill, solder or expose container to heat, flame, sparks, or other sources of ignition: it may explode, causing serious injury or death.

Special fire Fighting Procedures: Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Cool fire exposed areas and equipment.

Section 7 - Accidental Release Measures

If product leaks or is inadvertently spilled, remove ignition sources and isolate surrounding spill area with the proper containment system to prevent the spill from reaching waterways. Add absorbent and soak up the product. Collect product and absorbent, place in a chemical waste container for proper disposal.

Section 8 - Handling and Storage

Avoid contact with skin and remove soiled or soaked clothing. Wash hands with soap and water before eating, drinking, and/or smoking. Clean skin thoroughly after work and if necessary, apply skin cream.

Store product under normal temperature and pressure.

Store product away from heat sources and food products.

Section 9 - Physical and Chemical Properties

Boiling Point (°C): N/Ap

Vapor Pressure (mm Hg.): N/Ap

Solubility in Water: Insoluble

Specific gravity (H₂O = 1): 0.82

Evaporation rate (ether = 1): N/Ap

Appearance and odor: Beige grease with a neutral odor

Section 10 - Stability and Reactivity

Stability: Stable

Conditions to avoid: Open flames and other sources of heat.

Materials to avoid: Strong oxidizers, such as pure oxygen.

Hazardous decomposition products: Thermal decomposition and burning may produce fumes, smoke, carbon monoxide and carbon dioxide.

Hazardous polymerization: Will not occur



Material Safety Data Sheet

Product name: **ISOFLEX NCA 15 (# 004180)**

Date: March 14, 2003

Replaces: May 2001

Page: 3 of 3

Section 11 - Toxicological Information

Acute: N/Av for the product.

Chronic: N/Av for the product.

Section 12- Disposal Considerations

Under RCRA, it is the user's responsibility to determine, at the time of disposal, whether the product meets any of the criteria for a hazardous waste defined in 40 CFR 261 Subpart C. As a non-contaminated finished product, this would not be considered RCRA hazardous waste.

Section 13- Transportation Information

Proper Shipping Name	Hazard Class or Division	UN ID	Packing Group
N/Av			

Section 14 – Regulatory Information

All product components comply with all applicable rules and orders under the Toxic Substance Control Act (TSCA).

The synthetic hydrocarbon in this product is on the WHMIS ingredient disclosure list.

Section 15 - Additional Information

HMIS Rating: Health -1 Flammability - 1 Reactivity - 0 Personal Protection - B

Unk. = Unknown N/Av = Not Applicable N/A = Not Available ~ = Approximately



Material Safety Data Sheet

Product name: POLYLUB GLY 151 (# 020235)

Date: October 29,2003

Replaces: July 2001

Page: 1 of 3

Section 1 - Product and Company Identification

Company: Klüber Lubrication North America L.P. Emergency telephone #: 1-800-424-9300 (Chemtec)
32 Industrial Dr. Phone: (603) 647-4104
Londonderry, N.H. 03053 Fax: (603) 647-4105

Product Use: Lubricating grease.

Section 2 - Composition/Information on Ingredients

Ingredient	TLV	PEL
Synthetic Hydrocarbon Oil	N/Ap	N/Ap
Lithium Complex Soap	N/Ap	N/Ap
Mineral Oil	5 mg/m ³	5 mg/m ³

Section 3 - Hazards Identification

Eye Contact: May cause mild irritation upon immediate contact.

Skin contact: Prolonged or repeated contact may cause the removal of skin oils, possibly leading to irritation or dermatitis.

Inhalation: Vapor inhalation under ambient conditions will not occur. The inhalation of vapors (generated at extremely high temperature only) or mist may cause a mild irritation of the mucous membranes of the upper respiratory tract. Harmful concentrations of mists and/or vapors are unlikely to occur through reasonable and customary use of this product.

Ingestion: No acute or chronic effects expected. However, minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury.

Section 4 - Emergency and First Aid Procedures

After contact with eyes: Flush eyes with plenty of water for 15 minutes. If irritation persists, or if an infection develops, seek medical attention.

After contact with skin: Wash off with soap and plenty of water. Apply skin cream if necessary. Seek medical attention if irritation or infection occurs. Remove contaminated clothing and wash before reuse.

After inhalation: If overcome by product vapor heated to extreme temperatures, immediately move from exposure and get medical attention. If breathing is irregular, start resuscitation or administer oxygen if available. If overexposed to mist, remove from further exposure until excessive mist condition subsides.

After ingestion: If large amounts are swallowed, do not induce vomiting. Get medical attention.

Advice to doctor: Treat symptomatically.

Section 5 - Exposure Controls

Eye protection: Wear safety goggles if splashes may occur. Do not wear contact lenses when using chemicals.

Hand protection: Wear chemical resistant gloves.

Body protection: Wear clean, body-covering clothing to minimize dermal exposure.

Ventilation: Under normal conditions of use, no special ventilation is required. However, if vaporized or misted, use local exhaust if possible.

Respiratory protection: No special respiratory protection is required. However, if product is overheated beyond conditions of normal use, or misted, wear the appropriate NIOSH-approved respiratory protection.

Other protection measures: Safety showers, eye wash fountains, and washing facilities should be readily available.



Material Safety Data Sheet

Product name: POLYLUB GLY 151 (# 020235)

Date: October 29,2003

Replaces: July 2001

Page: 2 of 3

Section 6 - Fire Fighting Measures

Flash point: N/Av

Method: ASTM D 92

Lower explosion limit: N/Av

Upper explosion limit: N/Av

Extinguishing media: Water spray, foam, dry powder, carbon dioxide (CO₂)

Unusual fire and explosion hazards: Empty metal containers retain product residue. Do not pressurize, cut, weld, drill, solder or expose container to heat, flame, sparks, or other sources of ignition: it may explode, causing serious injury or death. Exposure to heat builds up pressure in container. Cool with water spray.

Special fire Fighting Procedures: If leak or spill has not ignited, use water spray to disperse any vapor and to flush spills away from ignition sources. Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Do not use direct stream of water, material may float and re-ignite.

Section 7 - Accidental Release Measures

If product leaks or is inadvertently spilled, eliminate ignition sources isolate surrounding spill area with the proper containment system to prevent the spill from reaching waterways. Add absorbent and soak up the product. Collect product and absorbent, place in a chemical waste container for proper disposal.

Section 8 - Handling and Storage

Avoid contact with skin and remove soiled or soaked clothing. Wash hands with soap and water before eating, drinking, and/or smoking. Clean skin thoroughly after work and if necessary, apply skin cream.

Store product under normal temperature and pressure.

Store product away from heat sources and food products.

Section 9 - Physical and Chemical Properties

Boiling Point: N/Av

Pour Point: N/Av

Vapor Pressure (mm Hg.): N/Av

Vapor Density (Air = 1): N/Av

Solubility in Water: Insoluble

Specific gravity (H₂O = 1): 0.85

Evaporation rate (ether = 1): N/Av

Appearance and odor: Beige with a neutral odor.

Section 10 - Stability and Reactivity

Stability: Stable

Conditions to avoid: Open flames and other sources of heat

Materials to avoid: Strong oxidizing agents such as pure oxygen

Hazardous decomposition products: Fumes, smoke, carbon monoxide and carbon dioxide.

Hazardous polymerization: Will not occur.



Material Safety Data Sheet

Product name: POLYLUB GLY 151 (# 020235)

Date: October 29, 2003

Replaces: July 2001

Page: 3 of 3

Section 11 - Toxicological Information

Acute toxicity: N/Av for this product.

Chronic toxicity: N/Av for this product.

Section 12- Disposal Considerations

Under RCRA, it is the user's responsibility to determine, at the time of disposal, whether the product meets any of the criteria for a hazardous waste defined in 40 CFR 261. As a new product it would not be considered RCRA hazardous waste.

Section 13- Transportation Information

Proper Shipping Name	Hazard Class or Division	UN ID	Packing Group
N/Av			

Section 14 – Regulatory Information

All product components comply with all applicable rules and orders under the Toxic Substance Control Act (TSCA).

Section 15 - Additional Information

HMIS Rating: Health -1 Flammability - 1 Reactivity - 0 Personal Protection - B

Unk. = Unknown N/Av = Not Applicable N/Av = Not Available ~ = Approximately



Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron White Oil T

Product Use: White oil
Product Number(s): CPS245026, CPS245028
Synonyms: Chevron White Oil 10-T, Chevron White Oil 60-T
Company Identification
ChevronTexaco Global Lubricants
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevron-lubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency
ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted.
(800) 231-0623 or (510) 231-0623

Product Information
email : lubemsds@chevrontexaco.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
White mineral oil	8042-47-5	100 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 170 °C (338 °F) (Min)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling

this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
White mineral oil	ACGIH	5 mg/m3	10 mg/m3	--	--
White mineral oil	OSHA Z-1	5 mg/m3	--	--	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless

Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Boiling Point: >315°C (599°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Specific Gravity: 0.85 - 0.88 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
Viscosity: 14 cSt @ 40°C (104°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms.

ENVIRONMENTAL FATE

This material is considered inherently biodegradable. This material is not expected to present any environmental problems other than those associated with oil spills. See Section 6 for Accidental Release Measures.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM OIL, N.O.I.B.N.; NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 0 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : BASE OIL 1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet:

1

Revision Date: 11/11/2005

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - ChevronTexaco	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the ChevronTexaco Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.