

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 1 of 8

1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT INFORMATION

Product Name: IMP 6148 POWER STEERING FLUID

Recommended Use:

Power steering fluid

External Keys:

10-5030	Distributable Material (Part #)
9985010	Productive Materials
10-5031	Distributable Material (Part #)
89020661	Distributable Material (Part #)
89021182	Distributable Material (Part #)
89021184	Distributable Material (Part #)
89021185	Distributable Material (Part #)
89021187	Distributable Material (Part #)
POWER STEERING FLUID	Primary Tradename - Distributable Material
PMRV0198	PMRV
PMRV0228	PMRV
PMRV0313	PMRV
PMRV0338	PMRV
CN35163	GM of Canada Approval Number
12378469	SPO Catalog Discontinued

MANUFACTURER INFORMATION

Manufacturer: IMPERIAL OIL Products Division

Address:

111 ST. CLAIR AVENUE WEST	CAN	ONTARIO	M5W 1K3	TORONTO	MAILING
240 4th Avenue S.W.	CAN	Alberta	T2P 3M9	Calgary	MAILING

Communication Lines:

Phone	519-339-2145	EMERGENCY
Phone	800-268-3183	INFO
Phone	416-968-4111	INFO
Phone	519-339-2145	Emergency 24 hr.
Phone	800-268-3183	Technical Information
Phone	416-968-4111	INFO

SUPPLIER INFORMATION

Supplier: IMPERIAL OIL Products Division

Address:

240 4th Avenue S.W.	CAN	Alberta	T2P 3M9	Calgary	MAILING
---------------------	-----	---------	---------	---------	---------

Communication Lines:

Phone	519-339-2145	Emergency 24 hr.
Phone	800-268-3183	Technical Information
Phone	416-968-4111	INFO

2 INGREDIENT INFORMATION

Synonyms:

Product Code: 17767

FORMULATION

Ingredients:

Exposure Limits

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 2 of 8

2 INGREDIENT INFORMATION

FORMULATION

Ingredients:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Prefix</u>	<u>Value</u>	<u>Unit</u>	
XYLENOL, PHOSPHATE (3:1)	25155-23-1	Range	0.1 - 1.0	%Wt	No

Comment:

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

3 HAZARDS IDENTIFICATION

Hazards Overview:

Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

Medical Conditions Aggravated By Exposure:

Not provided

4 FIRST AID MEASURES

First Aid By::

Inhalation	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.
Skin Contact	Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.
Eye Contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	First aid is normally not required. Seek medical attention if discomfort occurs.

5 FIRE FIGHTING MEASURES

Flash Point:

> 347 °F ASTM D-92 (> 175 C.)

Explosive Limits:

Upper Explosive Limit (UEL)	=	7.0	Flammable Limits (Approximate volume % in air).
Lower Explosive Limit (LEL)	=	0.9	Flammable Limits (Approximate volume % in air).

Autoignition Temperature:

Not Determined

Extinguishing Media:

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

Non Suitable Extinguishing Media:

Straight streams of water.

Fire and Explosion Hazards:

Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Pressurized mists may form a flammable mixture.

Hazardous Combustion Products: Aldehydes, Oxides of carbon, Smoke, Fume, Incomplete combustion products.

6 ACCIDENTAL RELEASE MEASURES

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 3 of 8

6 ACCIDENTAL RELEASE MEASURES

PRECAUTIONS IN CASE OF ACCIDENTAL RELEASE

Environmental Precautions:

Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SPILL OR LEAK PROCEDURES

Recovery:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

Disposal:

US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

7 HANDLING AND STORAGE

HANDLING

Safe Handling Procedures:

Prevent small spills and leakage to avoid slip hazard. Static Accumulator: This material is a static accumulator.

STORAGE

Storage Conditions:

Do not store in open or unlabelled containers.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE):

Eye Protection	If contact is likely, safety glasses with side shields are recommended.
Skin Protection	Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
Respiratory Protection	If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: No special requirements under ordinary conditions of use and with adequate ventilation. For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 4 of 8

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE):

air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: Chemical resistant gloves are recommended.

Hygiene Measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Special Precautions:

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical State: Liquid

Color: Amber

Odor: Characteristic

PHYSICAL PROPERTIES

pH Value:

Not
Applicable

Changes of State:

Boiling Point	>	600	°F	(> 316 C.)
Melting/Freezing Point	Not Applicable			Melting Point: Not applicable.
Pourpoint	=	-44	°F	(-42 C.)
Freezing point	Not Determined			

Vapor Pressure:

< 0.013 kPa = 20 °C (0.1 mm Hg)

Vapor Density:

> 2 at 101 kPa (Air = 1).

Evaporation Rate:

Not (N-BUTYL ACETATE = 1).
Determined

Specific Gravity:

= 0.88 = 15 °C

Solubility:

Water Negligible

Viscosity:

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 5 of 8

9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Viscosity:

Viscosity (cSt (20 mm²/sec) at 40°C |
7.8 cSt (7.8 mm²/sec) at 100°
C.)

Additional Chemical and Physical Data:

DMSO Extract (mineral oil only), IP-346	<	3	% Wt
Log Pow (n-Octanol/Water Partition Coefficient)	>	3.5	
Odor Threshold		Not Determined	

Comment:

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

10 STABILITY AND REACTIVITY

STABILITY INFORMATION

Stability Under Normal Conditions: Stable

Conditions to Avoid:

Excessive heat. High energy sources of ignition.

Incompatible Materials:

Strong oxidizers.

Hazardous Polymerization:

Will not occur.

HAZARDOUS DECOMPOSITION

Reactions:

<u>Type of Reaction</u>	<u>Reaction Products</u>
Decomposition	HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

11 TOXICOLOGICAL INFORMATION

SCIENTIFIC OBSERVATIONS

TOXICOLOGICAL EFFECTS

Product Data:

<u>Investigated Effect</u>	<u>Comment Observed</u>
Irritant Effects	Irritation: No end point data. Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.

Data By Chemical:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Comment</u>
XYLENOL, PHOSPHATE (3:1)	25155-23-1	Acute Toxicity: None.

LETHAL LIMIT VALUES

Product Data:

<u>Exposure Routes</u>	<u>Type</u>	<u>Prefix</u>	<u>Value</u>	<u>Unit</u>	<u>Species</u>	<u>Comment</u>
Inhalation	LC50	>	5000	mg/m ³	Rat	Minimally Toxic. Based on

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 6 of 8

11 TOXICOLOGICAL INFORMATION

SCIENTIFIC OBSERVATIONS

LETHAL LIMIT VALUES

Product Data:

<u>Exposure Routes</u>	<u>Type</u>	<u>Prefix</u>	<u>Value</u>	<u>Unit</u>	<u>Species</u>	<u>Comment</u>
Ingestion	LD50	>	2000	mg/kg	Rat	assessment of the components. Irritation: No end point data. Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components. Minimally Toxic. Based on test data for structurally similar materials.
Skin Contact	LD50	>	2000	mg/kg	Rabbit	Minimally Toxic. Based on test data for structurally similar materials. Irritation: Data available. Negligible irritation to skin at ambient temperatures. Based on assessment of the components
Eye Contact					Rabbit	Irritation: Data available. May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.

CLASSIFICATION OF INGREDIENTS

Carcinogenicity:

CHRONIC/OTHER EFFECTS: Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation.

Reproductive Effects:

Reproductive Toxicity: Adverse effects on fertility were observed.

Comment:

CHRONIC/OTHER EFFECTS: Not sensitizing in test animals. Trixylenyl Phosphate (TXP): Exposure to large amounts over a prolonged time may cause neurological effects. The potential for delayed peripheral neuropathy is very low and will be dependent on the level of ortho isomer.

Additional information is available by request.

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT

Comment:

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 7 of 8

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT

Comment:

The information given is based on data available for the material, the components of the material, and similar materials.

MOBILITY: Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY: Biodegradation: Base oil component -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL: Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

ECOTOXICITY

Comment:

Material -- Not expected to be harmful to aquatic organisms.

13 DISPOSAL CONSIDERATIONS

Waste Disposal Information:

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Comment:

Empty Container Warning (where applicable): Empty containers may retain residue and can be dangerous. DO NOT PRESSURISE, 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. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

14 TRANSPORT INFORMATION

DOT Information:

Not Regulated for Land Transport.

Comment:

LAND (TDG): Not Regulated for Land Transport.

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code.

AIR (IATA): Not Regulated for Air Transport.

15 REGULATORY INFORMATION

LABELLING

Hazard Codes:

HMIS Reactivity	0
HMIS Health	1
HMIS Flammability	1
NFPA Flammability	1
NFPA Health	1
NFPA Reactivity	0

NATIONAL REGULATIONS

SARA 311/312: No

SARA 313: No

Immediate Health: No

Delayed Health: No

Prod.Name: IMP 6148 POWER STEERING FLUID
Manufacturer: IMPERIAL OIL Products Division
Supplier: IMPERIAL OIL Products Division
HMCS ID: 349179
SUC: 04 - Metal Working Fluids and Lubricants

MATERIAL SAFETY DATA SHEET

Revision: 25.Aug.2009
Effective: 25.Aug.2009
Print Date: 21.Dec.2009
Page: 8 of 8

15 REGULATORY INFORMATION

NATIONAL REGULATIONS

Fire: No

Sudden Pressure Release: No

Reactive: No

Other Regulation:

OSHA HAZARD COMMUNICATION STANDARD

When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

SARA (313) TOXIC RELEASE INVENTORY

This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below

DIPHENYLAMINE (122-39-4): 5, 18.
SOLVENT DEWAXED LIGHT PARAFFINIC DISTILLATE (PETROLEUM) (64742-56-9): 17,18.

16 OTHER INFORMATION