SAFETY DATA SHEET

1. Identification

Product identifier **VP Lubricant Base Oils**

Other means of identification

SDS number PB361337-00

CAS number 64742-70-7/64742-54-7

Synonyms Blended Oils - VP 150 - 610; Straight Cut Oils - VP 165, 500, 700, 850M; Industrial Oils - VP 230i - 600i

Recommended use Base material for the production of various lubricating oils

A complex combination of hydrocarbons obtained from a catalytic dewaxing process. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C20 through C50 and produces a finished oil with a viscosity of at least 100 SUS at 100°F (19cSt at 40°C).

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Paulsboro Refining Company
800 Billingsport Road
Paulsboro, NJ 08066, USA

E-mail PBR.SDS@pbfenergy.com

Telephone 856-224-6605

Emergency telephone Chemtrec 800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The substance does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Paraffin oils (petroleum), catalytic dewaxed heavy	Blended Oils - VP 150 - 610; Straight Cut Oils - VP 165, 500, 700, 850M; Industrial Oils - VP 230i - 600i	64742-70-7/64742-54-7	100

IP346 method DMSO extract for base oil substances: <3.0%.

4. First-aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention, if needed.

Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Get medical attention if any discomfort continues.
Most important symptoms/effects, acute and delayed	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Foam. Dry chemical powder. Carbon dioxide (CO2). Water may be an ineffective extinguishing medium.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.
General fire hazards	The product is not flammable. Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. In case of spills, beware of slippery floors and surfaces. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Vapors may be controlled using a water fog. Remove with vacuum trucks or pump to storage/salvage vessels. Use explosion proof electric equipment. Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination. Retain all contaminated water for removal and treatment.
Environmental precautions	Contain spillages with sand, earth or any suitable adsorbent material. Prevent entry into waterways, sewer, basements or confined areas. Do not allow material to contaminate ground water system. Reporting of releases to appropriate regulatory agencies may be required.

7. Handling and storage

Precautions for safe handling	Keep away from heat, spark, open flames and other sources of ignition. Avoid prolonged or repeated contact with skin. Be aware of potential for surfaces to become slippery. Use caution when handling hot material. Observe good industrial hygiene practices. Use personal protective equipment as required. See Section 8 of the SDS for Personal Protective Equipment.
Conditions for safe storage, including any incompatibilities	Store in a dry place. Keep away from incompatible materials, open flames and high temperatures.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Oil Mist, mineral	PEL	5 mg/m3	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Oil Mist, mineral	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Oil Mist, mineral	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

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

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Nitrile or neoprene gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Other suitable gloves can be recommended by the glove supplier.

Skin protection

Other Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Follow OSHA respirator regulations (29CFR 1910.134) and use NIOSH/MSHA approved respirators. Check with respiratory protective equipment suppliers.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations 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.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Clear liquid.

Color Amber.

Odor Mild.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not applicable.

Initial boiling point and boiling range > 600.8 °F (> 316 °C)

Flash point > 300.2 °F (> 149.0 °C) ASTM D-92

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) > 0.6

Flammability limit - upper (%)	< 7
Vapor pressure	< 0.1 mm Hg (20°C)
Vapor density	> 2
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	No data available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	> 20 mm²/s (40°C)
Other information	
Explosive properties	Not explosive.
Molecular formula	UVCB
Oxidizing properties	Not oxidizing.
Pour point	24.8 °F (-4 °C)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of oil mist or vapors formed during heating of the product will irritate the respiratory system and provoke coughing.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	No harmful effects expected in amounts likely to be ingested by accident. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.
Symptoms related to the physical, chemical and toxicological characteristics	Prolonged or repeated skin contact may cause drying, cracking, or irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Product	Species	Test Results
Paraffin oils (petroleum), catalytic dewaxed heavy (CAS 64742-70-7/64742-54-7)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
Aerosol		
LD50	Rat	> 5000 mg/m³
Oral		
LD50	Rat	> 5000 mg/kg

Product	Species	Test Results
Chronic		
Dermal		
NOAEL		> 2000 mg/kg/D Developmental toxicity/Teratogenicity Study. Published data.
	Rabbit	1000 mg/kg/D, 28 days
	Rat	>= 1000 mg/kg/D Reproductive and developmental effects
Inhalation		
Vapor		
NOAEC	Rat	> 220 mg/m³, 28 days
Oral		
NOAEL	Rat	>= 1000 mg/kg/D Reproductive and developmental effects

Skin corrosion/irritation Not irritating, tested on rabbit.
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Not irritating, tested on rabbit.
Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Due to lack of data the classification is not possible.

Skin sensitization Not classified. Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406).

Germ cell mutagenicity In vitro gene mutation test: Ames test: Negative.
In vivo (Mouse) micronucleus test: negative.

Carcinogenicity This material contains polycyclic aromatic compounds (PACs). Based on the results of a gravimetric analysis for PACs (i.e., IP 346 method), it would not be expected to possess dermal carcinogenic potential, since the weight percentage of DMSO extractables is < 3.0.

IARC Monographs. Overall Evaluation of Carcinogenicity

Paraffin oils (petroleum), catalytic dewaxed heavy (CAS 64742-70-7/64742-54-7)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity The results of animal studies gave no indication of a fertility impairing effect. No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity - single exposure No obvious adverse effect was observed.

Specific target organ toxicity - repeated exposure In animal experiments, no adverse effects were observed after repeated exposure.

Aspiration hazard Due to the high viscosity the product is not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

Further information Symptoms may be delayed. Pre-existing skin conditions including dermatitis might be aggravated by exposure to this product.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
Paraffin oils (petroleum), catalytic dewaxed heavy (CAS 64742-70-7/64742-54-7)			
Aquatic			
Acute			
Algae	NOEL	Pseudokirchneriella subcapitata	> 100 mg/l, 72 Hours
Crustacea	EL50	Daphnia magna	> 10000 mg/l, 48 Hours
Fish	LL50	Pimephales promelas	> 100 mg/l, 96 Hours

Product		Species	Test Results
Chronic			
Crustacea	NOEL	Daphnia magna	10 mg/l, 21 days

Persistence and degradability The product is expected to be slowly biodegradable.

Bioaccumulative potential The product is not expected to bioaccumulate.

Mobility in soil No data available for this product.

Mobility in general The product is insoluble in water.

Other adverse effects Oil spills are generally hazardous to the environment.

13. Disposal considerations

Disposal instructions Recover and recycle, if practical. Dispose in accordance with all applicable regulations.

Hazardous waste code Waste codes should be assigned by the user based on the application for which the product was used.

Waste from residues / unused products Dispose in accordance with applicable federal, state, and local regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) This substance is on the TSCA 8(b) inventory and is designated “active”.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Paraffin oils (petroleum), catalytic dewaxed heavy (CAS 64742-70-7/64742-54-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Paraffin oils (petroleum), catalytic dewaxed heavy (CAS 64742-70-7/64742-54-7)

US. Rhode Island RTK

Not regulated.

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Paraffin oils (petroleum), catalytic dewaxed heavy (CAS 64742-70-7/64742-54-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 29-July-2013

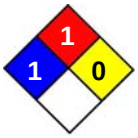
Revision date 25-August-2020

Version # 06

Further information B - Safety Glasses, Gloves

HMIS® ratings
Health: 0
Flammability: 0
Physical hazard: 0
Personal protection: B

NFPA ratings



References
CONCAWE Hazard classification and labelling of petroleum substances in the European Economic Area - 2010
ECHA: European Chemical Agency.

Disclaimer

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