SAFETY DATA SHEET



Section 1. Identification

Product name Variocut C Moly Dee

SDS # 468775 **Historic SDS #**: 05226

Code 468775-US03

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

Product use Metalworking fluid - neat.

For specific application advice see appropriate Technical Data Sheet or consult our

company representative.

Supplier Castrol Industrial North America, Inc.

150 W. Warrenville Road Naperville, IL 60563

Product Information: +1-877-641-1600

BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470

Telephone: (973) 633-2200

EMERGENCY SPILL

1 (800) 424-9300 CHEMTREC (USA)

INFORMATION:

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the POXIC TO REPRODUCTION (Fertility) - Category 2

substance or mixture SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (adrenal, liver, ovary,

testes) - Category 2

GHS label elements

Hazard pictograms



Signal word Warning

Hazard statements Suspected of damaging fertility.

May cause damage to organs through prolonged or repeated exposure. (adrenal, liver,

ovary, testes)

Precautionary statements

Prevention Obtain special instructions before use. Do not handle until all safety precautions have

been read and understood. Wear protective gloves. Wear eye or face protection. Wear

protective clothing. Do not breathe vapor.

Response Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention.

Storage Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Hazards not otherwise

classified

Defatting to the skin.

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Section 2. Hazards identification

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Highly refined mineral oil and additives

Ingredient name	CAS number	%
B ase oil - highly refined	Varies - See Key to	≥25 - ≤50
	abbreviations	
trixylyl phosphate	25155-23-1	≤5
Distillates (petroleum), solvent-refined heavy paraffinic	64741-88-4	≤3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.

Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and

remove any contact lenses. Get medical attention.

Skin contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes

while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash clothing before reuse. Clean shoes

thoroughly before reuse. Get medical attention.

Inhalation If inhaled, remove to fresh air. Get medical attention.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Never give

anything by mouth to an unconscious person. If unconscious, place in recovery position

and get medical attention immediately. Get medical attention.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may

be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treatment should in general be symptomatic and directed to relieving any effects.

Specific treatments No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing

media

media

Do not use water jet.

Specific hazards arising from the chemical

Swarf fires - Neat metal working oils may fume, thermally decompose or ignite if they come into contact with red hot swarf. To minimise the generation of red hot swarf ensure that a sufficient flow of oil is correctly directed to the cutting edge of the tool to flood it throughout cutting operations. As an additional precaution swarf should be regularly cleared from the immediate area to prevent the risk of fire. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst.

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Section 5. Fire-fighting measures

Hazardous combustion

Combustion products may include the following:

products

carbon dioxide carbon monoxide sulfur oxides phosphorus oxides

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable

training.

Special protective equipment for fire-fighters Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA)

and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Contact emergency personnel.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For nonemergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Avoid contact of spilled material and runoff with soil and surface waterways. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Do not breathe vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Avoid exposure obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid exposure during pregnancy. Concentrations of mist, fumes and vapors in enclosed spaces may result in the formation of explosive atmospheres. Excessive splashing, agitation or heating must be avoided. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid, as can bacteria, and as a result may induce allergic

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Section 7. Handling and storage

Advice on general occupational hygiene

and other skin reactions, especially if personal hygiene is inadequate.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Sulfur compounds in this material may decompose when heated to release hydrogen sulfide gas which may accumulate to potentially lethal concentrations in enclosed air spaces. Vapor concentrations of hydrogen sulfide above 50 ppm, or prolonged exposure at lower concentrations, may saturate human odor perceptions so that the smell of gas may not be apparent. Exposure to concentrations of hydrogen sulfide vapor above 500 ppm may cause rapid death. Do not rely on the sense of smell to detect hydrogen sulfide.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
■ Sase oil - highly refined	ACGIH TLV (United States). TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction OSHA PEL (United States). TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993
trixylyl phosphate	None.
Distillates (petroleum), solvent-refined heavy paraffinic	OSHA PEL (United States). TWA: 5 mg/m³ 8 hours. Issued/Revised: 6/1993 ACGIH TLV (United States). TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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Section 8. Exposure controls/personal protection

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection **Skin protection Hand protection**

Other skin protection

Respiratory protection

Safety glasses with side shields.

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/

manufacturer and with a full assessment of the working conditions.

Use of protective clothing is good industrial practice. **Body protection**

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

In case of insufficient ventilation, wear suitable respiratory equipment.

For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m3), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m3).

Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

Appearance

Physical state Liquid. Color Gray.

Odor Not available. **Odor threshold** Not available. рH Not available. **Melting point** Not available. **Boiling point** Not available.

Flash point Open cup: 200°C (392°F) [Cleveland.]

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Section 9. Physical and chemical properties

Evaporation rate Not available.

Flammability (solid, gas) Not applicable. Based on - Physical state

Lower and upper explosive

(flammable) limits

Not available.

Vapor pressure Not available.
Vapor density Not available.

Density <1000 kg/m³ (<1 g/cm³) at 15.6°C

Solubility insoluble in water.

Partition coefficient: n- Not available.

octanol/water

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Kinematic: 165 mm²/s (165 cSt) at 40°C

Section 10. Stability and reactivity

Reactivity No specific test data available for this product. Refer to Conditions to avoid and

Incompatible materials for additional information.

Chemical stability The product is stable.

Possibility of hazardous

reactions

Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid Avoid excessive heat.

Incompatible materialsReactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition

products

Hydrogen Sulfide (H2S)

Section 11. Toxicological information

Information on toxicological effects

Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
trixylyl phosphate	Category 2		adrenal, liver, ovary and testes

Information on the likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact

No known significant effects or critical hazards.

Skin contact

No known significant effects or critical hazards.

Inhalation Vapor inhalation under ambient conditions is not normally a problem due to low vapor

pressure.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

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Section 11. Toxicological information

Skin contact Adverse symptoms may include the following:

irritation dryness cracking

reduced fetal weight increase in fetal deaths skeletal malformations

Inhalation No specific data.

Ingestion Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Long term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Potential chronic health effects

General May cause damage to organs through prolonged or repeated exposure.

CarcinogenicityNo known significant effects or critical hazards.MutagenicityNo known significant effects or critical hazards.TeratogenicityNo known significant effects or critical hazards.Developmental effectsNo known significant effects or critical hazards.

Fertility effects Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition Not available.

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coefficient (Koc)

Mobility Non-volatile. Liquid. insoluble in water.

Other adverse effects No known significant effects or critical hazards.

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Section 12. Ecological information

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	UN3082	UN3082
UN proper shipping name	-	-	Environmentally hazardous substance, liquid, n.o.s. (trixylyl phosphate). Marine pollutant (trixylyl phosphate)	Environmentally hazardous substance, liquid, n.o.s. (trixylyl phosphate)
Transport hazard class(es)	-	-	9	9
Packing group	-	-	III	III
Environmental hazards	No.	No.	Yes.	Yes.
Additional information		-	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4. 1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8. Remarks Environmentally hazardous substance

Special precautions for user

Not available.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Not available.

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Section 15. Regulatory information

U.S. Federal regulations

United States inventory

All components are listed or exempted.

(TSCA 8b)

TSCA 12(b) one-time export: 1-decene, sulfurized

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification Delayed (chronic) health hazard

SARA 313

Form R - Reporting This product does not contain any hazardous ingredients at or above regulated

requirements

Supplier notification This product does not contain any hazardous ingredients at or above regulated

thresholds.

thresholds.

State regulations

Massachusetts The following components are listed: OIL MIST, MINERAL; OIL MIST, MINERAL **New Jersey**

The following components are listed: MINERAL OIL (UNTREATED and MILDLY

TREATED)

Pennsylvania The following components are listed: OILS, LARD

California Prop. 65 WARNING: This product contains a chemical known to the State of California to cause

birth defects or other reproductive harm.

Toluene

Other regulations

Australia inventory (AICS) All components are listed or exempted. **Canada inventory** All components are listed or exempted. China inventory (IECSC) All components are listed or exempted. Japan inventory (ENCS) At least one component is not listed. Korea inventory (KECI) All components are listed or exempted.

Philippines inventory

(PICCS)

Taiwan Chemical Not determined.

Substances Inventory

(TCSI)

REACH Status For the REACH status of this product please consult your company contact, as

At least one component is not listed.

identified in Section 1.

Section 16. Other information

National Fire Protection Association (U.S.A.)



History

Date of issue/Date of 03/03/2017.

revision

Date of previous issue 11/22/2016.

Prepared by **Product Stewardship**

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Section 16. Other information

Key to abbreviations

ACGIH = American Conference of Industrial Hygienists

ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

CAS Number = Chemical Abstracts Service Registry Number

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as

modified by the Protocol of 1978. ("Marpol" = marine pollution)

OEL = Occupational Exposure Limit

SDS = Safety Data Sheet

STEL = Short term exposure limit TWA = Time weighted average

UN = United Nations

UN Number = United Nations Number, a four digit number assigned by the United

Nations Committee of Experts on the Transport of Dangerous Goods.

Varies = may contain one or more of the following 101316-69-2, 101316-70-5, 101316-71-6, 101316-72-7, 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4,

64741-97-5, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-64-9,

64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1, 74869-22-0, 90669-74-2

▼ Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

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