SAFETY DATA SHEET



Section 1. Identification

Product name Castrol HD Lithium EP 2

464228 SDS#

Code 464228-US06 US81

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

Product use

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

company representative.

Supplier BP Lubricants USA Inc.

> 1500 Valley Road Wayne, NJ 07470

Telephone: (973) 633-2200

EMERGENCY HEALTH

INFORMATION:

1 (800) 447-8735

Outside the US: +1 703-527-3887 (CHEMTREC)

EMERGENCY SPILL

INFORMATION:

1 (800) 424-9300 CHEMTREC (USA)

Section 2. Hazards identification

OSHA/HCS status This material is not considered hazardous by the OSHA Hazard Communication

Standard (29 CFR 1910.1200).

Classification of the

substance or mixture

Not classified.

GHS label elements

Signal word No signal word.

Hazard statements No known significant effects or critical hazards.

Precautionary statements

Read label before use. Keep out of reach of children. If medical advice is needed, have General

product container or label at hand.

Prevention Not applicable. Response Not applicable. **Storage** Not applicable. **Disposal** Not applicable.

Hazards not otherwise Defatting to the skin.

classified Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure

constitute a major medical emergency.

See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

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Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Highly refined base oil (IP 346 DMSO extract < 3%). Thickening agent. Proprietary performance additives.

Ingredient name	CAS number	%
Base oil - highly refined	8052-42-4 Varies - See Key to abbreviations	≥50 - ≤75 ≥25 - ≤50

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 Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove

contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly

before reuse. Get medical attention if symptoms occur.

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

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Get medical

attention if symptoms occur.

Protection of first-aidersNo action shall be taken involving any personal risk or without suitable training.

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

reatment should in general be symptomatic and directed to relieving any effects.

Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis.

Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product

considerable distances along tissue planes.

Specific treatments No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing

media

Do not use water jet.

Specific hazards arising from the chemical

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 metal oxide/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.

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. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency 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).

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. 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. If emergency personnel are unavailable, contain spilled material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. 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).

Advice on general occupational hygiene

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. 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.

Not suitable Prolonged exposure to elevated temperature

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Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits		
Asphalt	ACGIH TLV (United States). TWA: 0.5 mg/m³, (Aerosol. (Benzenesoluble)) 8 hours. Issued/Revised: 3/2000 Form: Inhalable fraction TWA: 0.5 mg/m³, (as benzene soluble aerosol) 8 hours. Issued/Revised: 3/2000 Form: Inhalable fraction		
Base 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		

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.

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

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.

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Section 8. Exposure controls/personal protection

Body protection Use of protective clothing is good industrial practice.

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

Other skin protection 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.

Respiratory protection 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 Grease
Color Brown.
Odor Bland.
Odor threshold Not available.

pH Not available.

Melting point 176°C (348.8°F)

Boiling point 371°C (699.8°F)

Flash point Open cup: 204°C (399.2°F) [Cleveland.]

Evaporation rate Not available.

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

Lower and upper explosive

(flammable) limits

Not available.

Vapor pressureNot available.Vapor densityNot available.

Density 910 kg/m³ (0.91 g/cm³) at 16°C

Solubility insoluble in water.

Partition coefficient: n- Not available.

octanol/water

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

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Section 10. Stability and reactivity

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

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 all possible sources of ignition (spark or flame).

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

Hazardous decomposition

products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

NTP:

carcinogens.

Proven - Known to be human

to be human carcinogens.

Possible - Reasonably anticipated

(ENGLISH)

Section 11. Toxicological information

Information on toxicological effects

Classification

Product/ingredient name	OSHA	IARC	NTP
Asphalt	-	2B	-

Descriptors: OSHA:

+ - Potential occupational

carcinogen

IARC:

1 - Carcinogenic to human. 2A - Probable human carcinogen.

2B - Possible carcinogen to human.

3 - Not classifiable as a human carcinogen. 4 - Probably not a human

carcinogen.

Carcinogenicity Additional information

This product contains one or more components categorized by the International Agency for Research on Cancer (IARC) as 'Possibly carcinogenic to humans' (Group 2B). The category IARC 2B is used for agents for which there is inadequate to limited evidence of carcinogenicity in humans and less than sufficient to sufficient evidence of carcinogenicity in experimental animals. However, the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) allows consideration of additional factors such as weight of evidence and mode of action in assessing the carcinogenic hazard posed to humans. Consideration of these additional factors has led to the conclusion that this/these component(s) need not be classified as a carcinogenic under the GHS.

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.

Skin contact Adverse symptoms may include the following:

> irritation dryness cracking

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Section 11. Toxicological information

InhalationNo specific data.IngestionNo specific data.

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

GeneralNo known significant effects or critical hazards.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 effectsNo known significant effects or critical hazards.

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

Expected to be biodegradable.

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Mobility in soil

Soil/water partition Not available.

coefficient (Koc)

Mobility Spillages are unlikely to penetrate the soil.

Other adverse effects

No known significant effects or critical hazards.

Other ecological information

This product is unlikely to disperse in water.

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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. 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.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user

Not available.

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

Not available.

Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b)

All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification Not applicable.

SARA 313

Form R - Reporting

Supplier notification

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

requirements thresholds.

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

thresholds.

State regulations

Massachusetts The following components are listed: ASPHALT FUMES; ASPHALT (CUTBACK); OIL

MIST, MINERAL

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Section 15. Regulatory information

The following components are listed: ASPHALT; ASPHALT (TYPICAL); MINERAL OIL **New Jersey**

(UNTREATED and MILDLY TREATED)

Pennsylvania The following components are listed: ASPHALT

California Prop. 65 No products were found.

Other regulations

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

(PICCS)

Taiwan Chemical Substances Inventory

(TCSI)

REACH Status

Not determined.

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

identified in Section 1.

Section 16. Other information

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

Flammability Health Instability/Reactivity Special

History

Date of issue/Date of

revision

Date of previous issue

Prepared by

Key to abbreviations

03/08/2017.

11/02/2016. Product Stewardship

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

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Section 16. Other information

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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