

Material Safety Data Sheet



1. Chemical Product and Company Identification

Product name: CASTROL HYPURON S 15W-40
(Formerly Castrol Enduron S 15W-40)

MSDS# 0000001670

Historic MSDS#: None.

Product Use Automotive engine crankcase lubricant
For specific application advice see appropriate Technical Data Sheet or consult your Castrol representative

Supplier Castrol Heavy Duty Lubricants Inc
9300 Pulaski Highway
Baltimore, Maryland 21220-2495

EMERGENCY HEALTH INFORMATION: 1 (800) 447-8735

EMERGENCY SPILL INFORMATION: 1 (800) 424-9300
CHEMTREC (USA)

OTHER PRODUCT INFORMATION 1 (866) 4 BP - MSDS
(866-427-6737 Toll Free - North America)
email: bpcares@bp.com

2. Composition / information on ingredients

Ingredient Name	CAS #	% by Weight	Exposure Limits
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	60-100	ACGIH (United States). TWA: 5 mg/m ³ 8 hour(s). Form: OIL MIST, MINERAL STEL: 10 mg/m ³ 15 minute(s). Form: OIL MIST, MINERAL OSHA (United States). PEL: 5 mg/m ³ 8 hour(s). Form: OIL MIST, MINERAL
1-DECENE, HOMOPOLYMER, HYDROGENATED	68037-01-4	10-15	None assigned.
Zinc alkyl dithiophosphate	68649-42-3	1-5	None assigned.

3. Hazards identification

Physical state Liquid.

Color Amber. Clear.

Emergency Overview Caution!
MAY CAUSE EYE IRRITATION.
Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Avoid contact with skin and clothing. Wash thoroughly after handling.

Routes of Entry Skin contact. Eye contact. Inhalation. Ingestion.

POTENTIAL HEALTH EFFECTS

Eyes	May cause eye irritation.
Skin	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Used engine oil may contain hazardous components which have the potential to cause skin cancer.
Inhalation	Mist : May cause respiratory tract irritation.
Ingestion	Causes gastrointestinal irritation and diarrhea.

4. First-aid measures

Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin Contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

5. Fire-fighting measures

Flammability of the Product	May be combustible at high temperature.
Flash point	230 °C (Open cup)
Products of Combustion	These products are carbon oxides (CO, CO ₂), sulfur oxides (SO ₂ , SO ₃ ...) and oxides of phosphorus.
Unusual fire/explosion hazards	Slightly flammable to flammable in presence of open flames, sparks and static discharge, of heat. This material is not explosive as defined by established regulatory criteria.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Protective Clothing (Fire)	Firefighters should wear full bunker gear, including a positive pressure self-contained breathing apparatus.

6. Accidental release measures

Personal Precautions	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).
Environmental Precautions and Clean-up Methods	If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

7. Handling and storage

Handling	Avoid breathing vapors or spray mists. Avoid contact with eyes. Avoid contact with skin. Wear suitable protective clothing. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

8. Exposure controls/personal protection

Occupational Exposure Limits

DISTILLATES (PETROLEUM),
HYDROTREATED HEAVY PARAFFINIC

ACGIH (United States).
TWA: 5 mg/m³ 8 hour(s). Form: OIL MIST, MINERAL
STEL: 10 mg/m³ 15 minute(s). Form: OIL MIST, MINERAL
OSHA (United States).
PEL: 5 mg/m³ 8 hour(s). Form: OIL MIST, MINERAL

Control Measures

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Hygiene measures

Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Personal Protection

Eyes

Avoid contact with eyes. Chemical splash goggles.

Skin and Body

Avoid prolonged or repeated contact with skin. Wear protective clothing if prolonged or repeated contact is likely.

Respiratory

None required; however, use of adequate ventilation is good industrial practice. If heated and ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and P95 particulate filter.

Hands

Wear protective gloves if prolonged or repeated contact is likely.

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state	Liquid.
Odor	Mild.
Color	Amber. Clear.
Pour Point	-32 °C
Specific Gravity	<1
Density	<1 g/cm ³ at 20 °C
Vapor Pressure	<0.001 kPa (<0.01 mmHg) (at 20°C)
Solubility	Insoluble in cold water.
Viscosity	Kinematic at 40°C: 118 cSt Kinematic: 15.9 cSt at 100°C
Viscosity Index	143

10. Stability and reactivity

Stability and Reactivity	The product is stable.
Conditions to avoid	Keep away from heat, sparks and flame. Keep away from sources of ignition.
Incompatibility with Various Substances	Reactive with oxidizing agents.
Hazardous Decomposition Products	Products of Combustion: carbon oxides (CO, CO ₂), sulfur oxides (SO ₂ , SO ₃ ...) and oxides of phosphorus.
Hazardous Polymerization	Will not occur.

11. Toxicological information

Acute toxicity	Toxicity testing not conducted. Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis. Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhea. At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs.
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Chronic toxicity

Carcinogenic Effects

No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA).

Other chronic toxicity data

Studies have shown that used motor oil causes skin tumors after a long latency period (over one year) in a low percentage of mice (below 10%); when applied to the skin twice a week for their lifetimes. The material was not washed off between applications. A skin cancer risk may exist for people from prolonged or repeated contact with used motor oil in the absence of good personal hygiene.

In case of contact, wash exposed skin thoroughly with soap and water or use waterless hand cleaners to remove used motor oils from skin. Do not use gasoline, thinners, or solvents. Wear protective clothing and impervious gloves when working with used motor oils. Remove oil-soaked clothing, including shoes, and thoroughly clean and dry before reuse.

12. Ecological information

Ecotoxicity	Ecological testing has not been conducted on this product by Castrol.
Persistence/degradability	Inherently biodegradable
Mobility	Spillages may penetrate the soil causing ground water contamination.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Other Ecological Information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13. Disposal considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Consult your local or regional authorities.	

14. Transport information

Not classified as hazardous for transport (DOT, TDG, UN, IMO, IATA/ICAO).

15. Regulatory information

U.S. Federal Regulations	US INVENTORY (TSCA): In compliance. For restricted use only. TSCA 12(b) annual export notification: Alkylated phenol (P-00-346): 2.3% SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355): This product is not regulated under Section 302 of SARA and 40 CFR Part 355. SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370): Immediate (Acute) Health Hazard SARA 313 toxic chemical notification and release reporting: Zinc compound 1.2% CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): This material is not regulated under CERCLA Sections 103 and 107.
State Regulations	Pennsylvania RTK: DIPHENYLAMINE: (environmental hazard, generic environmental hazard) Massachusetts RTK: DIPHENYLAMINE New Jersey: DIPHENYLAMINE California prop. 65: No products were found.
Inventories	AUSTRALIAN INVENTORY (AICS): Not listed. CANADA INVENTORY (DSL): In compliance. CHINA INVENTORY (IECS): Not listed. EC INVENTORY (EINECS): In compliance. For restricted use only. JAPAN INVENTORY (ENCS): Not listed. KOREA INVENTORY (ECL): In compliance. PHILIPPINE INVENTORY (PICCS): Not listed.

16. Other information

Label Requirements	Caution MAY CAUSE EYE IRRITATION.
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Hazardous Material
Information System
(U.S.A.)

Health	0
Fire Hazard	0
Reactivity	0
Personal Protection	X

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

Health	1	1	0
Fire Hazard		Instability	
Specific Hazard			

HISTORY

Product Name CASTROL HYPURON S 15W-40

MSDS#

0000001670

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Version 1

Date of Issue 10/29/2003.

Format US-FULL

Language

(ENGLISH)

SECTION D - FIRE PROTECTION INFORMATION (Continued)

HANDLING PRECAUTIONS: Use product with caution around heat, sparks, pilot lights, static electricity and open flame.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS: Fumes, smoke, carbon monoxide, sulfur oxides, and other decomposition products, in the case of incomplete combustion.

EXTINGUISHING MEDIA & FIRE FIGHTING PROCEDURES: Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on the size or potential size of fire and circumstances related to the situation. Plant fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's *Fire Protection Guide on Hazardous Materials*. Use water spray, dry chemical, foam, or carbon dioxide to extinguish the fire.

Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

EMPTY CONTAINER WARNING: "Empty" containers retain residue (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 OR OTHER SOURCES OF IGNITION: THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION E - PROTECTION & PRECAUTIONS

VENTILATION: Use local exhaust to capture vapor, mists or fumes, if necessary. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. No smoking, flame or other ignition sources.

RESPIRATORY PROTECTION: Use supplied-air respiratory protection in confined or enclosed spaces, if needed.

PROTECTIVE GLOVES: Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION: Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT: Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing, which could result in prolonged or repeated skin contact.

WORK PRACTICES / ENGINEERING CONTROLS: Keep containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. In order to prevent fire or explosion hazards, use appropriate equipment.

PERSONAL HYGIENE: Minimize breathing vapor, mist or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean before reuse; discard if oil-soaked. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed skin by waterless hand cleaners followed by washing thoroughly with soap and water.

VARIABILITY AMONG INDIVIDUALS: Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks, which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

SECTION F - SPILL OR LEAK PROCEDURE

ENVIRONMENTAL IMPACT: Report spills as required to the appropriate authorities. US Coast Guard Regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to the Coast Guard toll free number 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Recover free product. Add sand, earth, or other suitable absorbent material to the spill area. Minimize breathing vapors. Minimize skin contact.

Keep product out of sewers and watercourses by dicing or impounding. Advise authorities if the product has entered or may enter sewers, watercourses, or extensive land areas. **ASSURE CONFORMITY WITH ALL APPLICABLE REGULATIONS.**

WASTE DISPOSAL: Dispose of in an environmentally safe manner and in accordance with all government regulations to include Federal, State, and local requirements.

SECTION G - REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS & MATERIALS TO AVOID: Avoid heat, open flames and oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes combustion. Carbon monoxide and other unidentified organic compounds may be formed upon combustion.

SECTION H - EMERGENCY & FIRST AID PROCEDURES AND PRIMARY ROUTES OF ENTRY

EYE CONTACT: If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritations persist, call a physician. **SKIN CONTACT:** In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

INGESTION: If ingested, DO NOT induce vomiting; call a physician immediately.

INHALATION: Vapor pressure is very low. Vapor inhalation under ambient temperature conditions is not normally a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician. Administer oxygen, if available. If over-exposed to oil mist, remove from further exposure until excessive mist oil condition subsides.

SECTION I - EFFECTS OF OVEREXPOSURE

SKIN: Prolonged or repeated skin contact may cause skin irritation. **EYE:** May cause eye irritation. **INGESTION:** Relatively nontoxic.

SECTION J - TRANSPORTATION INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT) - DOT Identification Number: Not Regulated.

THE PRECISE COMPOSITION OF THIS MIXTURE IS PROPRIETARY INFORMATION. A MORE COMPLETE DISCLOSURE WILL BE PROVIDED TO A PHYSICIAN OR NURSE IN THE EVENT OF A MEDICAL EMERGENCY.