



UNIVERSAL HDX ENGINE OIL

High Quality Heavy Duty Diesel Engine Oil

PRODUCT DESCRIPTION

QUAKER STATE[®] UNIVERSAL HDX ENGINE OILS are high quality fleet motor oils for use in diesel engines and 4-cycle gasoline engines. They are designed primarily for use in today's high output, high performance heavy-duty diesel engines, while still meeting the requirements of 4-cycle automotive gasoline engines. QUAKER STATE[®] UNIVERSAL HDX ENGINE OILS are formulated with select base stocks and advanced technology detergent, dispersant, anti-wear and anti-corrosion additives and are designed to provide excellent performance even in diesel engines equipped with Exhaust Gas Recirculation (EGR). These oils exceed the API and engine manufacturer performance requirements as given below.

QUAKER STATE[®] UNIVERSAL HDX ENGINE OILS provide excellent performance and protection in low temperature operation (multigrades) as well as high speed, high temperature operation.

APPLICATION

QUAKER STATE[®] UNIVERSAL HDX ENGINE OILS are recommended for use in heavy duty naturally aspirated and turbocharged 2-cycle and 4-cycle diesel engines (including engines equipped with Exhaust Gas Recirculation (EGR)) used in mobile and stationary service, as well as in modern 4-cycle automotive gasoline engines. They meet or exceed the requirements of the following industry, military and equipment builder specifications:

- SAE 15W-40: API CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF/SL, Mack EO-M Plus; Caterpillar ECF-1, Cummins CES 20078, 20076, & 20077; Volvo VDS-3, Mercedes 228.3 and Allison C4
- SAE 10W-30: API CI-4, CH-4, CG-4, CF-4, CF/SL, Mack EO-M Plus; Cummins CES 20078 & 20076
- SAE 10W: API CF; Allison C4, meets Vickers 35VQ25
- SAE 30: API CF-2, CF/SJ; Allison C4
- SAE 40: API CF-2, CF/SJ

BENEFITS

- Meets Ford WSS-M2C171C
- Formulated for mixed fleet applications
- Helps minimize piston deposits
- Excellent bearing corrosion control
- Protects new EGR diesel engines designed to meet today's low emission specifications
- Excellent cold cranking capabilities
- Helps reduce engine wear to help increase engine life
- Outstanding high temperature protection

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
QUAKER STATE® UNIVERSAL HDX ENGINE OIL**

TEST	TYPICAL RESULTS				
SAE Grade	10W	30	40	10W-30	15W-40
API Gravity	29.5	29.3	28.9	30.0	29.1
Viscosity					
@ 40°C, cSt	38	97	143	78	118
@ 100°C, cSt	6.5	10.9	14.4	11.5	15.8
Viscosity Index	120	107	103	140	137
CCS Viscosity cps Max					
@ Temp. °C	7000 @ -25	---	---	7000 @ -25	7000 @ -20
Flash Point, °C(°F)	207(405)	224(435)	230(446)	210(410)	210(410)
Pour Point, °C(°F)	-30 (-22)	-30(-22)	-24(-11)	- 33 (-22)	- 33(-27)
TBN, D-2896	6 min	7	7	10	11
Sulfated Ash, % wt.	0.90	0.95	0.95	1.2	1.3
Low Temp. Pumping Viscosity					
@ -30°C (-22°F) cP Max	60,000			60,000	
@ -25°C (-13°F) cP Max					60,000
Material Number					
Bulk	30119	30319	30419	30619	30719

MATERIAL SAFETY DATA SHEET

Review Date: 07/06/2006

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: QUAKER STATE™ Universal HDX Engine Oil - All Grades

MSDS NUMBER: 615080LU - 1

PRODUCT CODE(S): 11033, 11035, 11036, 11038, 11059, 11060, 29038, 29040, 29041, 29045, 30108, 30110, 5042359, 5071406, 5071407

PRODUCT USE: Motor Oil

MANUFACTURER

SOPUS Products
P.O. Box 4427
Houston, TX. 77210-4427

TELEPHONE NUMBERS

Spill Information: (877) 242-7400
Health Information: (877) 504-9351
MSDS Assistance Number: (877) 276-7285

SECTION 2 PRODUCT/INGREDIENTS

INGREDIENTS	CAS#	CONCENTRATION
Heavy Duty Motor Oil		
Highly refined petroleum oils	Mixture	90 - 99 %weight
Proprietary Additives	Mixture	1 - 3 %weight
Zinc Dialkyldithiophosphate	68649-42-3	1 - 3 %weight

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance & Odor: Dark amber liquid. Slight Hydrocarbon Odor.

Health Hazards: No known immediate health hazards.

Physical Hazards: No known physical hazards.

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0

Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Route(s) of Exposure: Skin

Inhalation:

Inhalation of vapors (generated at high temperatures only) or oil mist may cause mild irritation of the nose, throat, and respiratory tract.

Eye Irritation:

Lubricating oils are generally considered no more than minimally irritating to the eyes.

Skin Contact:

May cause slight irritation of the skin. If irritation occurs, a temporary burning sensation and minor redness and/or swelling may result. Other adverse effects not expected from brief skin contact.

Ingestion:

Lubricating oils are generally no more than slightly toxic if swallowed.

Other Health Effects:

The International Agency for Research on Cancer (IARC) has determined there is sufficient evidence for the carcinogenicity in experimental animals of used gasoline motor oils. Handling procedures and safety precautions in the MSDS should be followed to minimize exposure to the used product.

Material may release hydrogen sulfide (H₂S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H₂S can cause irritation of the eyes and respiratory tract, headache, dizziness, nausea, vomiting, diarrhea, and pulmonary edema. The odor ("rotten egg") threshold is 0.02 ppm. Do not depend on sense of smell for warning; H₂S rapidly deadens the sense of smell.

Signs and Symptoms:

Irritation as noted above.

Aggravated Medical Conditions:

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

For additional health information, refer to section 11.

SECTION 4	FIRST AID MEASURES
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Inhalation:

If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Skin:

Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye:

Flush eyes with large amounts of water for at least 15 minutes. If redness, burning, blurred vision or swelling persist, transport to nearest medical facility for additional treatment.

Ingestion:

Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Note to Physician:

In general, emesis induction is unnecessary in high viscosity, low volatility products such as oils and greases.

SECTION 5	FIRE FIGHTING MEASURES
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Flash Point [Method]: >400 °F/>204.44 °C [Cleveland Open Cup]

Upper Flammability Limit: Not Determined

Lower Flammability Limit: Not Determined

Extinguishing Media:

This material is non-flammable. Material will float and can be re-ignited on surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO₂) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:

Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. This material is non-flammable.

Unusual Fire Hazards:

Material may ignite when preheated.

SECTION 6	ACCIDENTAL RELEASE MEASURES
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Protective Measures:

May burn although not readily ignitable.

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Place in container for proper disposal.

Reporting:

CERCLA: Product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) petroleum exclusion. Releases to air, land, or water are not reportable under CERCLA (Superfund).

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 1-800-424-8802.

SECTION 7	HANDLING AND STORAGE
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Precautionary Measures:

Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles such as shoes or belts that cannot be decontaminated. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Material may release hydrogen sulfide (H₂S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H₂S may collect in the headspace of the container.

Storage:

Do not store in open or unlabeled containers. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Container Warnings:

Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SECTION 8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Chemical	Limit	TWA	STEL	Ceiling	Notation
Oil mist, mineral	ACGIH TLV	5 mg/m ³	10 mg/m ³		
Oil mist, mineral	OSHA PEL	5 mg/m ³			

Decomposition Product	Limit	TWA	STEL	Ceiling	Notation
Hydrogen sulfide	ACGIH - TLV	10 ppm	15 ppm		
Hydrogen sulfide	OSHA - PEL_IS	10 ppm	15 ppm		

Decomposition Product	Method	Condition
Hydrogen sulfide	Elevated Temperatures	> 180 Degrees F.

Exposure Controls

Provide adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Personal Protection

Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

Eye Protection:

Chemical Goggles, or Safety glasses with side shields

Skin Protection:

Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by:

Neoprene, or Nitrile Rubber

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:

For Mist: Air Purifying, R or P style NIOSH approved respirator.

For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator. Self-contained

breathing apparatus for use in environments with unknown concentrations or emergency situations.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance & Odor: Dark amber liquid. Slight Hydrocarbon Odor.

Substance Chemical Family: Lubricants

Physical State: Liquid

Flash Point	> 400 °F [Cleveland Open Cup]	Pour Point	-40 °F - 10 °F
Specific Gravity	0.873	Viscosity	38 cSt - 210 cSt @ 40 °C

Odor Threshold: Not Determined

Partition Coefficient: Not Determined

pH: Not Determined

SECTION 10	REACTIVITY AND STABILITY
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Stability:

Material is stable under normal conditions.

Conditions to Avoid:

Avoid heat and open flames.

Materials to Avoid:

Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Carbon Monoxide, Carbon Dioxide, Hydrogen Sulfide, Nitrogen Oxides and other unidentified organic compounds may be formed upon combustion.

SECTION 11	TOXICOLOGICAL INFORMATION
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Acute Toxicity

TEST	Result	OSHA Classification	Material Tested
Dermal LD50	>5.0 g/kg(Rabbit)	Non-Toxic	Based on components(s)
Oral LD50	>5.0 g/kg(Rat)	Non-Toxic	Based on components(s)

Carcinogenicity Classification

Chemical Name	NTP	IARC	ACGIH	OSHA
Heavy Duty Motor Oil	No	Not Reviewed	No	No

Sensitization	Contact with skin may cause allergic skin reaction.
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SECTION 12	ECOLOGICAL INFORMATION
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Environmental Impact Summary:

There is no ecological data available for this product. However, this product is an oil. It is persistent and does not readily biodegrade. However, it does not bioaccumulate.

SECTION 13	DISPOSAL CONSIDERATIONS
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RCRA Information:

Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal.

SECTION 14	TRANSPORT INFORMATION
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US Department of Transportation Classification

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

International Air Transport Association

Not regulated under IATA rules.

International Maritime Organization Classification

Not regulated under International Maritime Organization rules.

SECTION 15	REGULATORY INFORMATION
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Federal Regulatory Status

OSHA Classification:

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

WHMIS Classification: Not a controlled substance.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Ozone Depleting Substances (40 CFR 82 Clean Air Act):

This material does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

Superfund Amendment & Reauthorization Act (SARA) Title III:

There are no components in this product on the SARA 302 list.

SARA Hazard Categories (311/312):

Immediate Health	Delayed Health	Fire	Pressure	Reactivity
NO	NO	NO	NO	NO

SARA Toxic Release Inventory (TRI) (313):

Zinc compounds

Toxic Substances Control Act (TSCA) Status:

All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:

Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, Chinese Inventory, European EINECS, Korean Inventory, Philippines PICCS,

State Regulation

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

SECTION 16 OTHER INFORMATION

Revision#: 1

Revision Date: 10/19/2004

Review Date: 07/06/2006

Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been revised to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17 LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODE(S): 11033, 11035, 11036, 11038, 11059, 11060, 29038, 29040, 29041, 29045, 30108, 30110, 5042359, 5071406, 5071407

QUAKER STATE™ Universal HDX Engine Oil - All Grades

CAUTION!

MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS. USED GASOLINE ENGINE OIL HAS BEEN SHOWN TO CAUSE CANCER IN LABORATORY

ANIMALS.

Precautionary Measures:

Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid breathing of vapors, fumes, or mist. Use only with adequate ventilation. Wash thoroughly after handling.

FIRST AID

Inhalation: If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Skin Contact: Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye Contact: Flush with water. If irritation occurs, get medical attention. If redness, burning, blurred vision or swelling persist, transport to nearest medical facility for additional treatment.

Ingestion: Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth.

FIRE

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO₂) to extinguish flames. Do not use a direct stream of water. Material will float and can be re-ignited on surface of water.

SPILL OR LEAK

Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

CONTAINS: Highly refined petroleum oils, Mixture; Proprietary Additives, Mixture; Zinc Dialkyldithiophosphate, 68649-42-3

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0

TRANSPORTATION

US Department of Transportation Classification

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flames or heat. Keep container closed and drum bungs in place.

Name and Address

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427

ADMINISTRATIVE INFORMATION

MANUFACTURER ADDRESS: SOPUS Products, P.O. Box 4427, Houston, TX. 77210-4427

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