

Product Name: EXXSOL™ D60(S) FLUID

Revision Date: 18 Dec 2015

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SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: EXXSOL™ D60(S) FLUID

Product Description: Isoparaffinic Hydrocarbon

Recommended Use: Solvent

COMPANY IDENTIFICATION

Country	Supplier (company name / address / phone)	24 Hour Environmental / Health Emergency Telephone Number
China	EXXONMOBIL CHEMICAL SERVICES (SHANGHAI) CO., LTD. Correspondence address: 1099 Zixing Road Minhang District Shanghai, China (+86) 021-24173000	(+86) 0532-83889090 (NRCC)
China/Hong Kong	EXXONMOBIL CHEMICAL INTERNATIONAL SERVICES LTD. 22/F, Central Plaza	PRC: (+86) 0532-83889090 (NRCC) HK: (+852) 800-968-793 (CHEMTREC)

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	18 Harbour Road Wanchai, Hong Kong (+852) 31978888	
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SECTION 2

HAZARDS IDENTIFICATION

The hazard classification for this material is in accordance with the General Rules for Classification and Hazard Communication of Chemicals (GB 13690-2009).

CLASSIFICATION:

Flammable liquid: Category 4.

Aspiration toxicant: Category 1.

LABEL:

Symbol:



Signal Word: Danger

Hazard Statements:

Physical: H227: Combustible liquid.

Health: H304: May be fatal if swallowed and enters airways.

Precautionary Statements:

Prevention: P210: Keep away from flames and hot surfaces. No smoking. P280: Wear protective gloves and eye / face protection.

Response: P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do

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NOT induce vomiting. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

Contains: NAPHTHA (PETROLEUM), HYDROTREATED HEAVY

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited. Combustible.

HEALTH HAZARDS

Repeated exposure may cause skin dryness or cracking. May be irritating to the eyes, nose, throat, and lungs.

ENVIRONMENTAL HAZARDS

No significant hazards.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3	COMPOSITION / INFORMATION ON INGREDIENTS
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This material is defined as a complex substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	100 %	H227, H304

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* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Concentration values may vary.

SECTION 4

FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5

FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

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Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Combustible.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

FLAMMABILITY PROPERTIES

Flash Point [Method]: 61C (142F) - 66C (151F)

Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 5.3

Autoignition Temperature: >200C (392F)

SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic

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vapor and, when applicable, H₂S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do so without risk. Do not touch or walk through spilled material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7

HANDLING AND STORAGE

HANDLING

Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing

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may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100×10^{-12} Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient]

Storage Pressure: [Ambient]

Suitable Containers/Packing: Tank Trucks; Railcars; Barges; Drums

Suitable Materials and Coatings (Chemical Compatibility): Teflon; Polypropylene; Polyethylene; Stainless Steel; Carbon Steel; Polyester

Unsuitable Materials and Coatings: Ethylene-propylene-diene monomer (EPDM); Natural Rubber; Polystyrene; Butyl Rubber

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EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source	Year
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	Vapour.	RCP - TWA	1200 mg/m ³	171 ppm	Total Hydrocarb ons	ExxonMobil	2009

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator Type A filter material.

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For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves. Nitrile

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

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Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Form: Clear
Colour: Colourless
Odour: Mild Petroleum/Solvent
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density: N/D
Density (at 15 °C): 776 kg/m³ (6.48 lbs/gal, 0.78 kg/dm³)
Flash Point [Method]: 61C (142F) - 66C (151F)
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 5.3
Flammability (Solid, Gas): N/A
Autoignition Temperature: >200C (392F)
Boiling Point / Range: 183C (361F) - 208C (406F)
Vapour Density (Air = 1): > 1 at 101 kPa
Vapour Pressure: 0.07 kPa (0.53 mm Hg) at 20 °C | 0.24 kPa (1.8 mm Hg) at 38C
| 0.5 kPa (3.75 mm Hg) at 50C
Evaporation Rate (n-butyl acetate = 1): 0.05
pH: N/D
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Negligible
Viscosity: 1.3 cSt (1.3 mm²/sec) at 40 C | 1.64 cSt (1.64 mm²/sec) at 25C
Freezing Point: <-50C (-58F)
Melting Point: N/D
Decomposition Temperature: N/D
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

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Molecular Weight: 170

Coefficient of Thermal Expansion: 0.00094 V/V/DEG C

SECTION 10	STABILITY AND REACTIVITY
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STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Open flames and high energy ignition sources.

MATERIALS TO AVOID: Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
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INFORMATION ON TOXICOLOGICAL EFFECTS

<u>Hazard Class</u>	<u>Conclusion / Remarks</u>
Inhalation	
Acute Toxicity: (Rat) 8 hour(s) LC50 > 5000 mg/m3 (Vapour)	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Acute Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available.	May dry the skin leading to discomfort and dermatitis. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404
Eye	

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Serious Eye Damage/Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available.	Not expected to be a germ cell mutagen. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 474 476 478 479
Carcinogenicity: Data available.	Not expected to cause cancer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 453
Reproductive Toxicity: Data available.	Not expected to be a reproductive toxicant. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 414 421 422
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: Data available.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 408 413 422

OTHER INFORMATION

For the product itself:

Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

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Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

3 = IARC 1

5 = IARC 2B

2 = NTP SUS

4 = IARC 2A

6 = OSHA CARC

SECTION 12	ECOLOGICAL INFORMATION
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The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

Material -- Not expected to demonstrate chronic toxicity to aquatic organisms

MOBILITY

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be inherently biodegradable

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

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Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION

VOC: Yes

SECTION 13	DISPOSAL CONSIDERATIONS
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Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

NATIONAL CATALOGUE OF HAZARDOUS WASTES

HW42 - Organic Solvents Wastes

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

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SECTION 14

TRANSPORT INFORMATION

China List of Dangerous Goods (GB 12268 - 2012) : Not Regulated for Land Transport

[Footnote: Regulated as Category 5 Class 2 under the Dangerous Goods Regulation for Hong Kong.]

INTERNATIONAL CLASSIFICATION FOR TRANSPORT

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

SEA (MARPOL 73/78 Convention - Annex II)

Product Name: NOXIOUS LIQUID, N.F.,(9) N.O.S., (EXXSOL D60(S), contains iso-and cycloalkanes (C12+))

Ship type: 3

Pollution category: Z

AIR (IATA): Not Regulated for Air Transport

SECTION 15

REGULATORY INFORMATION

The hazard classification for this material is in accordance with the General Rules for Classification and Hazard Communication of Chemicals (GB 13690-2009).

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

The General Rules for preparation of precautionary label for Chemicals (GB 15258-2009): Regulated

Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste:
See Disposal Considerations section.

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Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

SECTION 16

OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H227: Combustible liquid; Flammable Liquid, Cat 4

H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 15: China Hazard Statement information was modified.

Hazard Identification: US - Hazards Statement - GHS information was added.

Hazard Identification: AP - Hazards Statement - GHS information was deleted.

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DGN: 4405997HCN (1011610)
