

Product Name: EXXSOL D80

Revision Date: 16 Dec 2021

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# MATERIAL SAFETY DATA SHEET

MSDS No.: N/A

**SECTION 1 PRODUCT AND COMPANY IDENTIFICATION****A. Product Name: EXXSOL D80****Product Description:** Dearomatized Hydrocarbons**Product Code:** 3510101010P1, 881599**B. Recommended Use of Product and Restrictions in Use.****Recommended use of the product:** Solvent and extraction agents**Restrictions in Use:** This product is not recommended for any industrial, professional or consumer use other than the identified uses above.**C. Manufacturer/Supplier information:****For details contact****Mobil Korea Lube Oil Inc.**

Level 22, Seoul Square bd., 416

Hangang-daero, Jung-gu,

Seoul Republic of Korea

<b>Emergency Response Number</b>	00-308-13-2549 / +1-703-527-3887
<b>Supplier General Contact</b>	82-2-750-8700
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**SECTION 2 HAZARDS IDENTIFICATION**

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

**A. Hazard Classification:**

Flammable liquid: Category 4.

Aspiration toxicant: Category 1.

**B. Label Elements Including Precautionary Statements:****Hazard Pictogram:**

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**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 heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking. P280: Wear protective gloves and eye protection/face protection.

Response: P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.

Storage: P403: Store in a well-ventilated place. P405: Store locked up.

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

**C. Other Hazards Which Are Not Included In The Classification Criteria**

**Physical / Chemical Hazards**

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

**Health Hazards**

High-pressure injection under skin may cause serious damage. Repeated exposure may cause skin dryness or cracking. Excessive exposure may result in eye, skin, or respiratory irritation.

**Environmental Hazards**

No significant hazards.

**NFPA Hazard ID:** Health: 1 Flammability: 2 Reactivity: 0

**HMIS Hazard ID:** Health: 1 Flammability: 2 Reactivity: 0

**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.

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

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

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Name	Other Name	CAS # or Id. No.	Concentration*	GHS Hazard Codes
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	-	KE-12550	100 %	H227, H304

\* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

## SECTION 4 FIRST AID MEASURES

### A. Eye Contact

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

### B. Skin Contact

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

### C. 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.

### D. Ingestion

Seek immediate medical attention. Do not induce vomiting.

### E. Other note to physician

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

### Acute and Delayed Symptoms/Effects

See Toxicological Section

### Pre-existing Medical Conditions Which May Be Aggravated By Exposure

None.

## SECTION 5 FIRE FIGHTING MEASURES

### Flammability Properties

Flash Point [Method]: >70° C (158° F) [ ASTM D-93]

Autoignition Temperature: >200° C (392° F)

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 7.0

### A. Suitable (and Unsuitable) Extinguishing Media

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**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

## B. Specific Hazards arising from the Chemical

**Unusual Fire Hazards:** Combustible. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

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

## C. Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters 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.

## SECTION 6

## ACCIDENTAL RELEASE MEASURES

### A. Personal Precautions and Protective Equipment

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.

### B. Environmental Precautions and Protective Procedure

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

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

### C. Methods and Materials for Containment and Cleaning Up

**Land Spill:** Stop leak if you can do it without risk. 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 it 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

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this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

<b>SECTION 7</b>	<b>HANDLING AND STORAGE</b>
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### A. Precautions for Safe 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 ground procedures. However, bonding and grounds 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.

### B. Conditions for Safe Storage

The type of container used to store the material may affect 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 grounded 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; Drums; Barges; Railcars

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

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

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS AND PERSONAL PROTECTION</b>
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### A. Exposure Limit Values, Biological Limit Values

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

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Substance Name	Form	Limit / Standard			Note	Source	Year
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT		TWA	200 mg/m <sup>3</sup>		Skin	Korea OELs	2020
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT [Total Hydrocarbons]	Vapor.	RCP – TWA	1200 mg/m <sup>3</sup>	165 ppm		ExxonMobil	2009

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

No biological limits allocated.

## B. Appropriate 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.

## C. Personal Protective Equipment

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 Organic vapor

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/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

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

**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

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with forearms is likely, wear gauntlet style gloves. Nitrile

**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.

## SECTION 9

## PHYSICAL AND CHEMICAL PROPERTIES

**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.

### A. Appearance

**Physical State:** Liquid

**Form:** Clear

**Color:** Colorless (may be dyed)

**B. Odor:** Mild Petroleum/Solvent

**C. Odor Threshold:** N/D

**D. pH:** N/A

**E. Melting Point:** N/D

**Freezing Point:** N/D

**F. Initial Boiling Point / Range:** 192° C (378° F) – 245° C (473° F) [Estimated]

**G. Flash Point [Method]:** >70° C (158° F) [ ASTM D-93]

**H. Evaporation Rate (n-butyl acetate = 1):** < 0.01

**Density (at 15 °C):** 803 kg/m<sup>3</sup> (6.7 lbs/gal, 0.8 kg/dm<sup>3</sup> )

**I. Flammability (Solid, Gas):** N/A

**J. Flammable Limits (Approximate volume % in air):** LEL: 0.6 UEL: 7.0

**K. Vapor Pressure:** 0.03 kPa (0.23 mm Hg) at 20 ° C | 0.07 kPa (0.53 mm Hg) at 38° C  
| 0.157 kPa (1.18 mm Hg) at 50° C [Estimated]

**L. Solubility in Water:** Negligible

**M. Vapor Density (Air = 1):** > 1 at 101 kPa [Estimated]

**N. Relative Density (at 15 ° C):** 0.804

**O. Log Pow (n-Octanol/Water Partition Coefficient):** N/D

**P. Autoignition Temperature:** >200° C (392° F)

**Q. Decomposition Temperature:** N/D

**R. Viscosity:** 1.64 cSt (1.64 mm<sup>2</sup>/sec) at 40 ° C | 2.3 cSt (2.3 mm<sup>2</sup>/sec) at 25° C

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**S. Molecular Weight:** 172

## Other Information

**Pour Point:** < -20° C (-4° F)

**Hygroscopic:** No

**Coefficient of Thermal Expansion:** 0.00092 per Deg C

<b>SECTION 10</b>	<b>STABILITY AND REACTIVITY</b>
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### A. Chemical Stability and Possibility of Hazard Reactions

**Chemical Stability:** Material is stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**B. Conditions to Avoid:** Avoid heat, sparks, open flames and other ignition sources.

**C. Incompatible Materials:** Strong oxidizers

**D. Hazardous Decomposition Products:** Material does not decompose at ambient temperatures.

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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### A. Information on Likely Routes of Exposure

No data available

### B. Information on Health Hazards

#### Acute Toxicity (Inhalation):

Product

Data available. Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403

Inhalation Irritation: Data available. Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials.

#### Acute Toxicity (Ingestion):

Product

LD50 > 15000 mg/kg Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 401

#### Acute Toxicity (Dermal)

Product

LD50 > 3160 mg/kg Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402

#### Skin corrosion/irritation

Product

Data available. Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD



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Guideline 404

**Serious eye damage/irritation**

Product

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

**Respiratory sensitization**

Product

Not expected to be a respiratory sensitizer.

**Skin sensitization**

Product

Not expected to be a skin sensitizer.

**Carcinogenicity**

Product

Not expected to cause cancer.

**Germ cell mutagenicity**

Product

Not expected to be a germ cell mutagen.

**Reproductive toxicity**

Product

Not expected to be a reproductive toxicant.

**Specific target organ toxicity – single exposure**

Product

Not expected to cause organ damage from a single exposure.

**Specific target organ toxicity – repeat exposure**

Product

Not expected to cause organ damage from prolonged or repeated exposure.

**Aspiration hazard**

Product

May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.

**Other Information**

**For the product itself:**

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic 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.

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



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## B. Disposal precautions

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.

SECTION 14	TRANSPORT INFORMATION
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**REGULATION ON SHIP-TRANSPORTATION AND STORAGE OF DANGEROUS SUBSTANCES (SEA (IMDG))** Not Regulated for Sea Transport according to IMDG-Code

- A. **UN Number:** Not applicable
- B. **Proper Shipping Name:** Not applicable
- C. **Hazard Class & Division:** Not applicable
- D. **Packing Group:** Not applicable
- E. **Marine Pollutant:** Not applicable
- F. **Special Precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance:** Not applicable

**LAND (ADR/RID)** Not Regulated for Land Transport

- A. **UN Number:** Not applicable
- B. **Proper Shipping Name:** Not applicable
- C. **Hazard Class & Division:** Not applicable
- D. **Packing Group:** Not applicable
- E. **Marine pollutants:** Only applicable for sea transport
- F. **Special Precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance:** Not applicable

**AIR (IATA)** Not Regulated for Air Transport

- A. **UN Number:** Not applicable
- B. **Proper Shipping Name:** Not applicable
- C. **Hazard Class & Division:** Not applicable
- D. **Packing Group:** Not applicable
- E. **Marine pollutants:** Only applicable for sea transport
- F. **Special Precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance:** Not applicable

SECTION 15	REGULATORY INFORMATION
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This material is considered hazardous according to Korean GHS classification criteria.

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## Regulatory Status and Applicable Laws and Regulations

- A. **Industrial Safety & Health Act : Prohibited, Subject to an Approval for Manufacturing and Controlled Hazardous Substances:** None.
- B. **Chemicals Control Act : Toxic, Banned and Restricted Toxic Chemicals, Authorization substances, Accidental Release Prevention Substances and Priority Existing Chemicals to Registration:** None.
- C. **ACT ON THE SAFETY CONTROL OF HAZARDOUS SUBSTANCES:** Category 4. Class 3 petroleum chemicals–water insoluble liquids
- D. **Waste Control Act:** Waste Oil is a designated waste.
- E. **Other requirements in domestic and other countries**

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

<b>SECTION 16</b>
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<b>OTHER INFORMATION</b>
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- A. **Information sources and references:** Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, CONCAWE Product Dossiers, publications from other trade associations, such as the EU Hydrocarbon Solvents REACH Consortium, U.S. HPV Program Robust Summaries, the EU IUCLID Data Base, U.S. NTP publications, and other sources, as appropriate.
- B. **The first Issuing date:** 14Mar2007
- C. **Revision number and latest revision date**  
**Revision Number:**1  
**Revision Date:** 16 Dec 2021

D. **Others**

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:**MSDS reformatted and Implementation of new GHS

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adoption according to regulation requirements.

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