

# SAFETY DATA SHEET

Revision date: 2022-11-23

Version: LP7201.2

## 1. IDENTIFICATION

- A. Product name** : ZIC M7 4AT 10W-40 (XZIC M7 4AT 10W-40)
- B. Recommended use and restriction on use**
- General use : Lubricants
  - Restriction on use : Use only for lubricants
- C. Manufacturer / Supplier / Distributor information**
- Manufacturer information**
- **Company name**  
SK Enmove Co., Ltd.
  - **Address**  
26, Jong-ro, Jongno-gu, Seoul, Korea
  - **Dept.**  
SK Lubricants Business
  - **Telephone number** : +82-1899-1147
  - **Emergency telephone number**  
+82-1899-1147
  - **Fax number** : +82-2-2121-2601
  - **E-mail address** : jonghun.lee@sk.com
- Supplier/Distributor information**
- **Company name**  
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## 2. HAZARD IDENTIFICATION

- A. GHS Classification**
- Not applicable
- B. GHS label elements**
- Hazard symbols**
- Not applicable
- Signal words**
- Not applicable
- Hazard statements**
- Not applicable
- Precautionary statements**
- 1) **Prevention**
    - Not applicable
  - 2) **Response**
    - Not applicable
  - 3) **Storage**
    - Not applicable
  - 4) **Disposal**
    - Not applicable

### C. Other hazards which do not result in classification : (NFPA Classification)

#### ○ NFPA grade (0 ~ 4 level)

- Health : 0, Flammability : 1, Reactivity : 0

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	Trade names and Synonyms	CAS No.	%[weight]
ar-Nonyl-N-(nonylphenyl)benzenamine	DINONYL DIPHENYLAMINE	36878-20-3	>=0.1, < 1
Distillates (petroleum), hydrotreated heavy paraffinic	Emulsifiable oil	64742-54-7	>=89, < 99
Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts ; Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts ; PHOSPHORODITHIOIC ACID, O,O-DI(C1-14)-ALKYL ESTERS ZINC SALT ; DI-C1-14 ALKYL DITHIOPHOSPHORIC ACID, ZINC SALT ; PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS,ZINC SALTS ; Dialkyl(C1-C14)dithiophosphoric acid, zinc salt ; Phosphorodithioic acid, O,O-di-C1-14-alkyl ester, zinc salt ; Zinc, O,O-di(C1-14)-alkylphosphorodithioate ;	68649-42-3	>=0.1, < 1

## 4. FIRST AID MEASURES

### A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

### B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.

### C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

### D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

### E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

### F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

## 5. FIREFIGHTING MEASURES

### A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

### B. Specific hazards arising from the chemical

- Not available

### C. Special protective actions for firefighters

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.

## 6. ACCIDENTAL RELEASE MEASURES

### A. Personal precautions, protective equipment and emergency procedures

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment

## B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

## C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.

## 7. HANDLING AND STORAGE

### A. Precautions for safe handling

- Avoid direct physical contact.
- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.

### B. Conditions for safe storage, including any incompatibilities

- Save in cool, dry and well ventilated place.
- Check regularly for leaks.
- Please pay attention to incompatibilities materials and conditions to avoid.
- Keep sealed when not in use.
- No open fire.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### A. Exposure limits

#### ACGIH TLV

- [Distillates (petroleum), hydrotreated heavy paraffinic] : TWA 5 mg/m<sup>3</sup>, Inhalable particulate matter(Mineral oil, Pure, highly and severely refined)

#### OSHA PEL

- Not available

### B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

### C. Individual protection measures, such as personal protective equipment

#### Respiratory protection

- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.

#### Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

#### Hand protection

- Wear appropriate glove.

#### Skin protection

- Wear appropriate clothing.

#### Others

- Not available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### A. Appearance

- Appearance : Liquid
- Color : Transparent Brown

### B. Odor

: Mild petroleum odor

### C. Odor threshold

: Not available

### D. pH

: Not available

### E. Melting point/Freezing point

: Not available

### F. Initial Boiling Point/Boiling Ranges

: > 290 °C

### G. Flash point

: 230 °C (COC)

### H. Evaporation rate

: Not available

### I. Flammability(solid, gas)

: Not available

J. Upper/Lower Flammability or explosive limits	: Not available
K. Vapour pressure	: ≤ 0.1 kPa (20 °C)
L. Solubility	: Not available
M. Vapour density	: ≥ 5 (Air = 1)
N. Specific gravity(Relative density)	: 0.86 g/cm <sup>3</sup> (@15 °C)
O. Partition coefficient of n-octanol/water	: Not available
P. Autoignition temperature	: Not available
Q. Decomposition temperature	: Not available
R. Viscosity	: 100 mm <sup>2</sup> /s @ 40 °C
S. Molecular weight	: Not available

## 10. STABILITY AND REACTIVITY

### A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

### B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

### C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

### D. Incompatible materials

- Not available

### E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

## 11. TOXICOLOGICAL INFORMATION

### A. Information on the likely routes of exposure

#### (Respiratory tracts)

- Not available

#### (Oral)

- Not available

#### (Eye · Skin)

- Not available

### B. Delayed and immediate effects and also chronic effects from short and long term exposure

#### Acute toxicity

##### \* Oral

- Product (ATEmix) : >5000mg/kg
- [Distillates (petroleum), hydrotreated heavy paraffinic] : LD50 > 5000 mg/kg Rat (ECHA)
- [ar-Nonyl-N-(nonylphenyl)benzenamine] : LD50 > 5000 mg/kg Rat

##### \* Dermal

- Product (ATEmix) : >5000mg/kg
- [Distillates (petroleum), hydrotreated heavy paraffinic] : LD50 >5000 mg/kg Rabbit (ECHA)

##### \* Inhalation

- Product (ATEmix) : Not available
- [Distillates (petroleum), hydrotreated heavy paraffinic] : Aerosol LC50 > 5.53 mg/L 4 hr, Rat, Read-across : CAS No. 64741-88-4 (ECHA)

#### Skin corrosion/irritation

- Not available

#### Serious eye damage/irritation

- Not available

#### Respiratory sensitization

- Not available

#### Skin sensitization

- Not available

#### Carcinogenicity

##### \* IARC

- Not available

##### \* OSHA

- Not available

**\* ACGIH**

- Not available

**\* NTP**

- Not available

**\* EU CLP**

- [Distillates (petroleum), hydrotreated heavy paraffinic] : Carc. 1B (Note L)

It is not considered carcinogenic. It has been demonstrated to contain less than 3% extractables by the IP 346 test (EU CLP Note L)

**Germ cell mutagenicity**

- Not available

**Reproductive toxicity**

- Not available

**STOT-single exposure**

- Not available

**STOT-repeated exposure**

- Not available

**Aspiration hazard**

- Not available

## 12. ECOLOGICAL INFORMATION

### A. Ecotoxicity

**Fish**

- [Distillates (petroleum), hydrotreated heavy paraffinic] : LL50 > 100 mg/L, 96hr, Pimephales promelas (ECHA)

- [Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts] : LC50 1 ~ 5 mg/ℓ 96 hr Pimephales promelas (ESIS)

**Crustaceans**

- [Distillates (petroleum), hydrotreated heavy paraffinic] : EL50 > 10000 mg/L, 48hr, Daphnia magna (ECHA)

- [Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts] : EC50 1 ~ 1.5 mg/ℓ 48 hr Daphnia magna (ESIS)

**Algae**

- [Distillates (petroleum), hydrotreated heavy paraffinic] : EC25 1152.9 mg/L, 96hr, Pseudokirchneriella subcapitata, NOEL >= 100 mg/L, 72hr (ECHA)

- [Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts] : EC50 1 ~ 5 mg/ℓ 96 hr Selenastrum capricornutum (ESIS)

### B. Persistence and degradability

**Persistence**

- [Distillates (petroleum), hydrotreated heavy paraffinic] : log Pow = 1.99 ~ 18.02 (20°C) (ECHA)

- [ar-Nonyl-N-(nonylphenyl)benzenamine] : log Kow 12.24 (Estimate)

**Degradability**

- Not available

### C. Bioaccumulative potential

**Bioaccumulative potential**

- [Phosphorodithioic acid O,O-dialkyl(C=1-14) esters zinc salts] : BCF 3.162 (Estimate)

- [ar-Nonyl-N-(nonylphenyl)benzenamine] : BCF 27400 (Has the potential bioaccumulation) (e-ChemPortal;CESAR)

**Biodegradation**

- [ar-Nonyl-N-(nonylphenyl)benzenamine] : 15 (%) 28 day (e-ChemPortal;CESAR)

### D. Mobility in soil

- [ar-Nonyl-N-(nonylphenyl)benzenamine] : Koc 35900000

(Can be adsorbed in the soil, Estimates)

### E. Other adverse effects

- Not available

## 13. DISPOSAL CONSIDERATIONS

### A. Disposal methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.

- If water separation is possible, pre-process with Water separation process.

- Dispose by incineration.

### B. Special precautions for disposal

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

## 14. TRANSPORT INFORMATION

### A. UN No. (IMDG CODE/IATA DGR)

- Not applicable

### B. Proper shipping name

- Not applicable

### C. Hazard Class

- Not applicable

### D. IMDG CODE/IATA DGR Packing group

- Not applicable

### E. Marine pollutant

- Not applicable

### F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available
- Air transport(IATA): Not subject to IATA regulations.

## 15. REGULATORY INFORMATION

### A. National and/or international regulatory information

#### POPs Management Law

- Not applicable

#### Information of EU Classification

##### \* Classification

- [Distillates (petroleum), hydrotreated heavy paraffinic] : H350

It is not considered carcinogenic. It has been demonstrated to contain less than 3% extractables by the IP 346 test (EU CLP Note L)

#### U.S. Federal regulations

##### \* OSHA PROCESS SAFETY (29CFR1910.119)

- Not applicable

##### \* CERCLA Section 103 (40CFR302.4)

- Not applicable

##### \* EPCRA Section 302 (40CFR355.30)

- Not applicable

##### \* EPCRA Section 304 (40CFR355.40)

- Not applicable

##### \* EPCRA Section 313 (40CFR372.65)

- Not applicable

#### Rotterdam Convention listed ingredients

- Not applicable

#### Stockholm Convention listed ingredients

- Not applicable

#### Montreal Protocol listed ingredients

- Not applicable

## 16. OTHER INFORMATION

### A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

### B. Issue date

2015-06-19

**C. Revision number and Last date revised**

Last date revised : 2

Revision number : 2022-11-23

**D. Other**

- This SDS is prepared according to the Globally Harmonized System (GHS).