

SAFETY DATA SHEET



Revision date: 2020-11-17

Version: A-P500(10).1

1. IDENTIFICATION

- A. Product name** : AP-5 (PG 64-22)
- B. Recommended use and restriction on use**
- **General use** : Paving, Oxidation asphalt manufacturing, Emulsified asphalt manufacturing
 - **Restriction on use** : Not available
- C. Manufacturer / Supplier / Distributor information**
- Manufacturer information**
- **Company name**
SK Energy Co.,Ltd.
 - **Address**
26, Jong-ro, Jongno-gu, Seoul, Republic of Korea
Plant) 2, Sinyecheon-ro, Nam-gu, Ulsan, Republic of Korea
 - **Dept.**
Safety Health Environment Team
 - **Telephone number** : Plant) 82-52-208-2114
 - **Emergency telephone number**
Plant) 82-52-208-2114
 - **Fax number** :
 - **E-mail address** :
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2. HAZARD IDENTIFICATION

- A. GHS Classification**
- Carcinogenicity : Category2
 - Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)
- B. GHS label elements**
- Hazard symbols**
- 

- Signal words**
- Warning
- Hazard statements**
- H335 May cause respiratory irritation.
 - H351 Suspected of causing cancer
- Precautionary statements**
- 1) Prevention

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.

2) Response

- P308+P313 If exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

3) Storage

- P405 Store locked up.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

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

○ NFPA grade (0 ~ 4 level)

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	%[weight]
Asphalt	Petroleum asphalt, all grades ; Asphaltum ; Bitumen ; Bitumens, asphalt ; Bituminous asphalt ; Bituminous materials, asphalt ; Petroleum bitumen ;	8052-42-4	100

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.
- Get medical attention immediately.

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.
- Get medical attention immediately.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Get medical attention immediately.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention 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.
- If exposed or concerned, get medical attention/advice.

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

- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Keep unauthorized people away, isolate hazard area and deny entry.
- Cleanup and disposal under expert supervision is advised.

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

- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Do not handle until all safety precautions have been read and understood.
- Operators should wear antistatic footwear and clothing.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not use damaged containers.
- Do not apply direct heat.
- Do not apply any physical shock to container.
- Avoid direct sunlight.
- Collected them in sealed containers.
- By specifying a storage area for carcinogenic substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

ACGIH TLV

- [Asphalt] : TWA, 0.5 mg/m³, as benzene-soluble inhalable aerosol

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	: Semi-solid or liquid
- Color	: Black
B. Odor	: Faint aromatic odor
C. Odor threshold	: Not available
D. pH	: Not available
E. Melting point/Freezing point	: Not available
F. Initial Boiling Point/Boiling Ranges	: ≥ 470 °C
G. Flash point	: ≥ 300 °C
H. Evaporation rate	: Not available
I. Flammability(solid, gas)	: Not available
J. Upper/Lower Flammability or explosive limits	: 7 / 0.9 Vol.%
K. Vapour pressure	: 0.1 mmHg (20 °C)
L. Solubility	: < 0.1 wt.% of Water
M. Vapour density	: Not available
N. Specific gravity(Relative density)	: 1.03
O. Partition coefficient of n-octanol/water	: Not available
P. Autoignition temperature	: Approximately 485 °C
Q. Decomposition temperature	: Not available
R. Viscosity	: 1600~2400 poise (60 °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)
 - May cause respiratory irritation.
 - (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
 - [Asphalt] : LD50 ≥ 5000 mg/kg Rat (No deaths OECD Guideline 401, GLP)
 - * Dermal
 - [Asphalt] : LD50 > 2000 mg/kg Rabbit
 - * Inhalation
 - [Asphalt] : Dust LC50 > 94.4 mg/m³ 4.5 hr Rat (No deaths OECD Guideline 403, GLP)
 - Skin corrosion/irritation
 - Not available
 - Serious eye damage/irritation

- Not available
- Respiratory sensitization**
 - Not available
- Skin sensitization**
 - Not available
- Carcinogenicity**
 - * **IARC**
 - [Asphalt] : Group 2B
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - [Asphalt] : A4
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- Germ cell mutagenicity**
 - Not available
- Reproductive toxicity**
 - Not available
- STOT-single exposure**
 - May cause respiratory irritation.
- STOT-repeated exposure**
 - Not available
- Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- Fish**
 - Not available
- Crustaceans**
 - Not available
- Algae**
 - Not available

B. Persistence and degradability

- Persistence**
 - Not available
- Degradability**
 - Not available

C. Bioaccumulative potential

- Bioaccumulative potential**
 - Not available
- Biodegradation**
 - Not available

D. Mobility in soil

- Not available

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)

- 3257

B. Proper shipping name

- ELEVATED TEMPERATURE LIQUID, N.O.S., AT OR ABOVE 100 C AND BELOW ITS FLASH POINT (INCLUDING MOLTEN METALS, MOLTEN SALTS, ETC.)

C. Hazard Class

- 9

D. IMDG CODE/IATA DGR Packing group

- III

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 : F-A (General fire schedule)
- EmS SPILLAGE SCHEDULE : S-P (Substances dangerous when wet (collectable articles))

15. REGULATORY INFORMATION

A. National and/or international regulatory information

POPs Management Law

- Not applicable

Information of EU Classification

* Classification

- Not applicable

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

2015-10-07

C. Revision number and Last date revised

Revision number : 1

Last date revised : 2020-11-17

D. Other

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