



SAFETY DATA SHEET

This safety data sheet complies with the requirements of OSHA Hazard Communication Standard (29 CFR 1910.1200)

1. PRODUCT IDENTIFICATION

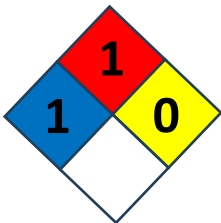
Product Name	SP HYDRAULIC AW 68
ISO Grade	68
Recommended Use	Premium anti-wear hydraulic oil
Restrictions On Use	This product should not be used for any other purpose than that recommended without expert advice.
Company Identification	AP SAIGON PETRO JSC 1 st Floor, 6B Ton Duc Thang Street, Sai Gon Ward, HCMC Hotline: 1900 0104 E-mail: info@apsaigonpetro.com.vn
Emergency Number	1900 0104 (Technical Assistance) 114 (Fire) 115 (Ambulance)

2. HAZARDS IDENTIFICATION

2.1. Classification Of The Substance Or Mixture

The product has not been classified as hazardous and does not need to be labelled according to regulation (EU) no 1272/2008 (CLP).

2.2. Label Elements

NFPA Diagram	 SLIGHTLY HAZARDOUS IGNITE WHEN PREHEATED STABLE NO SPECIFIC HAZARD
Hazard Pictogram	No symbol
Signal word	No signal word
Hazard statements	- H303: May be harmful if swallowed - H313: May be harmful in contact with skin - H316: Causes mild skin irritation - H333: May be harmful if inhaled
Precautionary statements	Prevention - P261: Avoid breathing dust/fume/gas/mist/vapours/spray. - P264+P265: Wash hands thoroughly after handling. Do not touch eyes



- P272: Contaminated work clothing should not be allowed out of the workplace.
- P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

- P301+P304: IF SWALLOWED: Get medical help.
- P331: Do NOT induce vomiting.

Storage

- P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal

- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other Hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>.

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

3. COMPOSITION INFORMATION

Highly refined mineral oils and additives. The highly refined mineral oil contains $<3\%$ (w/w) DMSO extract, according to IP346

<u>CAS-No.</u>	<u>Identification</u>	<u>Concentration</u> (%w/w)
64742-54-7	Chung cất (dầu mỏ), paraffin nặng được xử lý bằng hydro	99 ÷ 99,9
N/A	Zinc Dialkyl Dithiophosphates	0.1 ÷ 1.0

For more hazard information see Section 11.

4. FIRST AID MEASURES

<u>Protection of first aiders</u>	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings
<u>If inhaled</u>	No treatment necessary under normal conditions of use If symptoms persist, obtain medical advice
<u>In case of skin contact</u>	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention



<u>If swallowed</u>	In general, no treatment is necessary unless large quantities are swallowed, however, get medical advice
<u>Symptoms</u>	Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhea
<u>Treatment</u>	Notes to doctor/physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel

<u>Suitable extinguishing media</u>	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only
<u>Unsuitable extinguishing media</u>	Do not use water in a jet
<u>Specific hazards during firefighting</u>	During fire, a complex mixture of solid, liquid and gases hazardous to health may be formed
<u>Special protective equipment for firefighters</u>	Wear a chemical-resistant suit for large spills. Use SCBA in confined space fires. Choose firefighter clothing meeting relevant standards (e.g., EN469 in Europe)
<u>Specific extinguishing methods</u>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Section 8 of this Material Safety Data Sheet. See Section 13 for information on disposal. Observe the relevant local and international regulations.

<u>Protective measures</u>	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent drains, spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
<u>Environmental precautions</u>	Contain spills to prevent environmental damage. Use barriers (sand, earth, etc.) to stop spreading into drains/waterways. Notify authorities if large spills can't be contained
<u>Clean up methods</u>	Spills are slippery; clean immediately. Contain with sand, earth, or other material. Recover liquid directly or with an absorbent. Absorb residue with suitable material (e.g., clay, sand) and dispose of properly

**Additional advice**

Local authorities should be advised if significant spillages cannot be contained

7. HANDLING AND STORAGE

<u>General Precautions</u>	Use local exhaust ventilation if there is a risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
<u>Advice on safe handling</u>	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling products in drums, safety footwear should be worn, and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials to prevent fires.
<u>Product Transfer</u>	Proper grounding and bonding procedures should be used during all bulk transfer operations to avoid static accumulation.
<u>Other data</u>	Keep the container tightly closed and in a cool, well-ventilated place. Use properly labeled and closeable containers. Store at ambient temperature. Refer to section 15 regarding any additional specific legislation covering the packaging and storage of this product. The storage of this product may be subject to the Control of Pollution (Oil Storage) (England) Regulations. Further guidance may be obtained from the local environmental agency's office.
<u>Packaging material</u>	Suitable material: For containers or container linings, use mild steel or high-density polyethylene. Unsuitable material: PVC.
<u>Container Advice</u>	Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion
<u>Specific use(s)</u>	Not applicable

8. POSURE CONTROLS/PERSONAL PROTECTION**8.1 Exposure Limit**

	<u>ACGIH TLV/TWA</u>	<u>ACGIH STEL</u>	<u>OSHA PEL</u>
Oil mist	5mg/m ³	10mg/m ³	5mg/m ³

8.2. Biological Occupational Exposure Limits

No biological limit allocated

8.3. Monitoring Methods

Monitoring of worker exposure to substances may be required to ensure compliance with occupational exposure limits (OELs) and the effectiveness of controls. This may include air sampling and biological monitoring.

Validated methods should be used by qualified personnel, with samples analyzed in accredited laboratories.

For recommended measurement methods, please refer to:



National Institute of Occupational Safety and Health (NIOSH), <http://www.cdc.gov/niosh>

Occupational Safety and Health Administration (OSHA), <http://www.osha.gov/>

Health and Safety Executive (HSE), <http://www.hse.gov.uk/>

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung, <http://www.dguv.de/inhalt/index.jsp>

L'Institut National de Recherche et de Sécurité (INRS), <https://www.inrs.fr/accueil>

National or regional methods may also be available

Engineering controls

- The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:
- Adequate ventilation to control airborne concentration. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

General Information:

- Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
- Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycling.
- Always observe good personal hygiene measures, such as washing hands 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.

8.4. Personal protection

The provided information is made in consideration of the Personal Protective Equipment (PPE) directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardization (CEN) standards. PPE should meet recommended national standards.

<u>Pictogram(s) indicating the obligation of wearing PPE</u>	   
<u>Eye protection</u>	If material is handled such that it could be splashed into eyes, protective eyewear is recommended. Approved to EU Standard EN166.
<u>Hand protection</u>	Use gloves (PVC, neoprene, nitrile) approved to EN374 or F739 standards. Glove choice depends on contact time, chemical resistance, and dexterity. Replace contaminated gloves, wash hands after use and maintain clean hands. For continuous contact, choose gloves with >240 minutes' breakthrough time for splash protection, a lower time may be acceptable with proper maintenance. Glove thickness should be >0.35 mm.
<u>Skin and body protection</u>	Skin protection is not ordinarily required beyond standard work clothes.



	It is good practice to wear chemical resistant gloves.
<u>Respiratory protection</u>	Respiratory protection is not usually required under normal conditions. However, avoid inhaling material. If engineering controls don't reduce airborne concentrations adequately, use suitable respiratory protection. Consult suppliers for appropriate masks and filters. For air-filtering respirators, choose a filter for combined organic gases/vapors (Type A/Type P, boiling point > 65°C/149°F), meeting EN14387 and EN143 standards.
<u>Thermal hazards</u>	Not applicable
<u>Hygiene measures</u>	Exposure to this product should be reduced as low as reasonably practicable. Reference should be made to the Health and Safety Executive's publication "COSHH Essentials"

8.5. Environmental Exposure Controls

General advice

Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Wastewater should be treated in a municipal or industrial waste water treatment plant before discharged to surface water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Oily liquid
Odor	Slight
Odor threshold	No data available
pH	Not applicable
Initial boiling point and boiling range	No data available
Flammable limits	No data available
Flammability	Not applicable
Evaporation rate	< 0.01
Decomposition point/decomposition range	No data available
Stability	Product is stable under normal conditions.
Flash point	≥ 220 °C (ASTM D92)
Density	0.85 ÷ 0.87 at 15 °C



Pour point	$\leq -9\text{ }^{\circ}\text{C}$
Kinematic viscosity	$62.0 \div 74.0\text{ cSt at } 40\text{ }^{\circ}\text{C (ASTM D445)}$
Viscosity index	≥ 100
Appearance	Bright & Clear

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	Not classified
<u>Chemical stability</u>	Not classified
<u>Possibility of hazardous reactions</u>	Not classified
<u>Conditions to avoid</u>	No data available
<u>Materials to avoid</u>	No data available
<u>Hazardous decomposition products</u>	No data available
<u>Products of combustion</u>	No data available

11. TOXICOLOGICAL INFORMATION

11.1. Substances

<u>Identification</u>	<u>Hazard Class and Category Code(s)</u>
Distillates (petroleum), hydrotreated heavy paraffinic CAS: 64742-54-7	Not classified

11.2. Mixture

11.2.1. Delayed and immediate effects as well as chronic effects from short and long-term exposure

	SP HYDRAULIC AW 68
<u>Skin corrosion / irritation</u>	Not classified
<u>Serious eye damage/eye irritation</u>	Not classified
<u>Respiratory or skin sensitization</u>	Not classified
<u>Germ cell mutagenicity</u>	Not classified
<u>Reproductive toxicity</u>	Not classified



<u>STOT - single exposure</u>	Not classified
<u>STOT - repeated exposure</u>	Not classified
<u>Aspiration hazard</u>	Not classified

11.2.2. Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, OSHA or ACGIH.

The carcinogen classification does not apply because the substance contains less than 3 % w/w of dimethyl sulphoxide (DMSO) measured using the IP 346 method.

11.2.3. Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

<u>ATE mix</u>	<u>Oral route (LD50)</u>	<u>Oral route (LD50)</u>	<u>Inhalation route (LD50)</u>
SP HYDRAULIC AW 68	LD50 > 5000 mg/kg	LD50 > 5000 mg/kg	LC50 > 5 mg/L

Components information

<u>Identification</u>	<u>Oral route (LD50)</u> (OECD Guidelines 420)	<u>Dermal route (LC50)</u> (OECD Guidelines 402)	<u>Inhalation route (LD50)</u> (OECD Guidelines 403)
Distillates (petroleum), hydrotreated heavy paraffinic CAS: 64742-54-7	LD50 > 5000 mg/kg Specie: Rat	LD50 > 5000 mg/kg Specie: Rabbit	LC50 > 5 mg/L Specie: Cat

12. ECOLOGICAL INFORMATION

The product has not been tested. The statement has been derived from the properties of the individual components.

12.1 Substances

12.1.1 Acute aquatic toxicity

<u>Identification</u>	<u>Fish (LC 50)</u> (OECD Guidelines 203)	<u>Crustacean (EC50)</u> (OECD Guidelines 202)	<u>Algae (ECr50)</u> (OECD Guidelines 201)
Distillates (petroleum), hydrotreated heavy paraffinic CAS: 64742-54-7	LC50 > 100 mg/l Species: Oncorhynchus mykiss Duration of exposure: 96 h	EC50 > 10000 mg/l Species: Daphnia magna Duration of exposure: 48 h	ECr50 > 100 mg/l Species: Pseudokirchnerella subcapitata Duration of exposure: 48 h

12.1.2 Persistence and degradability

No data available

12.1.3 Bioenrichment or bioaccumulation



No data available

12.1.4 Mobility in soil

No data available

12.2 Mixture

SP HYDRAULIC AW 68			
<u>Acute aquatic toxicity</u>	<u>Fish (LC 50)</u>	<u>Crustacean (EC50)</u>	<u>Algae (ECr50)</u>
	No data available	No data available	No data available
<u>Persistence and degradability</u>	No data available		
<u>Bioenrichment or bioaccumulation</u>	No data available		
<u>Mobility in soil</u>	No data available		

13. DISPOSAL CONSIDERATION

<u>Waste disposal</u>	- Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose of the environment, in drains or in water courses. Waste products should not be allowed to contaminate soil or ground water or be disposed of into the environment. Waste, spills or used products are dangerous waste
<u>Remarks</u>	- Releases of this product should be prevented from contaminating soil, and from entering drainage, sewer systems, and all bodies of water. - Empty Container Warning: 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 approximately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractors and in accordance with governmental regulations. Do not pressurize, 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

14. TRANSPORT INFORMATION

<u>International regulations</u>	- ADR: Not regulated as a dangerous good - IMDG: Not regulated as a dangerous good - IATA: Not regulated as a dangerous good
<u>Land</u>	Not regulated for Land Transport.



<u>Sea (IMDG)</u>	Not regulated for Sea Transport according to IMDG-Code
<u>Air (IATA)</u>	Not regulated for Air Transport

15. REGULATORY INFORMATION

<u>Europe</u>	Classification and labelling information - EU Regulation No. 1272/2008 amended by EU Regulation No. 2018/1480 (ATP 13) - REACH Restricted substance under REACH, Annex XVII
<u>Vietnam</u>	Classification and labelling information - Circular 04 /2012/ TT-BCT regulates the classification type and labeling of chemicals Safety, health and environmental regulations/legislation specific for the substance or mixture - TCVN. 3164-79 Toxic classification - Article 29, Vietnam Chemical Law, and Appendix 5, Part D of Circular No. 12/2006/TT-BCN dated December 22, 2006, of the Ministry of Industry (“Circular 12”) - Vietnam's regulations on information transmission: Decree No. 13/2003 ND-CP dated February 19, 2003, defines the list of dangerous goods and the delivery of dangerous goods stain; - Information 02/2004/TT-BCN of the Ministry of Industry dated December 31, 2004, guiding implementation Government Decree No. 13/2003 ND-CP dated February 19, 2003; Decree 29/2005/ND-CP dated March 10, 2005 of the Government stipulates "list of dangerous goods and the movement of dangerous goods by local waterways. - Vietnam Chemical Law; Decree No. 108/2008/ND-CP dated October 7, 2008 of the Government on the implementation of Chemical Substances; Decree No. 68/2005/ND-CP dated May 20, 2005 of the Government on Chemical Safety; Circular 12/2006 TT-BCN dated December 22, 2006 of The Ministry of Industry guides the implementation of Decree No. 68/2005/ND-CP of the Government on Safety Chemicals; Law on Standards and Technical Indicators.
<u>Others</u>	All components comply with TSCA, SARA, EEC EINECS and METI.

16. OTHER INFORMATION

The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM	American Society for Testing and Materials
BEL	Biological exposure limits
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAS	Chemical Abstracts Service
EFIC	European Chemical Industry Council
CLP	Classification Packaging and Labelling
COC	Cleveland Open-Cup



DIN	Deutsches Institut für Normung
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
DSL	Canada Domestic Substance List
EC	European Commission
EC50	Effective Concentration fifty
ECETOC	European Center on Ecotoxicology and Toxicology Of Chemicals
ECHA	European Chemicals Agency
EINECS	The European Inventory of Existing Commercial Chemical Substances
EL50	Effective Loading fifty
ENCS	Japanese Existing and New Chemical Substances Inventory
EWC	European Waste Code
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IC50	Inhibitory Concentration fifty
IMDG	International Maritime Dangerous Goods
INV	Chinese Chemicals Inventory
IP346	Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics
DMSO	extractables
KECI	Korea Existing Chemicals Inventory
LC50	Lethal Concentration fifty
LD50	Lethal Dose fifty per cent.
LL/EL/IL	Lethal Loading/Effective Loading/Inhibitory loading
LL50	Lethal Loading fifty
MARPOL	International Convention for the Prevention of Pollution From Ships
NOEC/NOEL	No Observed Effect Concentration / No Observed Effect Level
OE_HP	Occupational Exposure - High Production Volume
PBT	Persistent, Bioaccumulative and Toxic
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No Effect Concentration
REACH	Registration Evaluation And Authorisation Of Chemicals
RID	Regulations Relating to International Carriage of Dangerous Goods by Rail
SKIN_DES	Skin Designation
STEL	Short term exposure limit
TRA	Targeted Risk Assessment
TSCA	US Toxic Substances Control Act
TWA	Time-Weighted Average vPvB very Persistent and very Bioaccumulative.

Department issuing MSDS

R&D, QC Department

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