

MATERIAL SAFETY DATA SHEET

1. LUBRICATING PRODUCT AND COMPANY IDENTIFICATION

COVERAGE: PanaOIL IGO 68 PRODUCT NUMBER: 062R

COMPANY IDENTIFICATION

PT Pana Oil Indonesia De Ploeit Centrale Lantai 5 no. 502 Jalan Pluit Selatan Raya blok Q Pluit, Penjaringan, Jakarta Utara Jakarta, Indonesia, 14450

PRODUCT INFORMATION

MSDS Request : +62 21 2266 2228 Technical Info : +62 21 2266 2279/80

EMERGENCY TELEPHONE NUMBERS

Health (24h) : +62 254 310 715 Office Hours : +62 21 2266 2228

2. COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINING

Petroleum Hydrocarbon and additives

COMPONENTS	CAS NUMBER	AMOUNT (%wt)	CARCINOGEN
Sulphurized hydrocarbon	Trade Secret	0.90-1.26	N/E
Phosphate ester	Trade Secret	0.09-0.18	N/E

N/E: None Established

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- CAUSES EYE IRRITATION
- MAY CAUSE AN ALLERGIC SKIN REACTION

IMMEDIATE HEALTH EFFECTS - EYE

Contact with eyes causes irritation. If this material is heated, thermal burns may result from eye contact.

IMMEDIATE HEALTH EFFECTS - SKIN

Contact with the skin is not expected to cause prolonged or significant irritation. Repeated contact with the skin may cause irritation. Contact with the skin may cause an allergic skin reaction. Not expected to be harmful to internal organs if absorbed through the skin. If this material is heated, thermal burns may result from skin contact.

IMMEDIATE HEALTH EFFECTS - INGESTION

Not expected to be harmful if swallowed.

IMMEDIATE HEALTH EFFECTS - INHALATION

Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

PT PANA OIL INDONESIA



IMMEDIATE HEALTH EFFECTS - CARCINOGENICITY

None of the components in this material are listed as carcinogens by IRAC, NTP, or OSHA.

IMMEDIATE HEALTH EFFECTS - SIGNS OF SYMPTOMS OF EXPOSURE

Eye irritation: may include pain, tearing, reddening, swelling, and impaired vision.

Thermal burns to the eye: may include pain, tearing, reddening, swelling, and impaired vision.

Symptoms of skin irritation or skin allergies may include pain, itching, reddening, swelling, and blistering.

Thermal burns to the skin: may include pain or feeling of heat, discoloration, swelling, and blistering.

Respiratory irritation: may include coughing and difficulty in breathing.

4. FIRST AID MEASURES

EYE

Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists. If heated material should splash into eyes, flush eyes immediately with fresh water for 15 minutes while holding the eyelids open. Remove contact lenses, if worn. Get immediate medical attention.

SKIN

Wash with soup and water. Get medical attention if rash or irritation develops. Launder contaminated clothing before reuse.

If heated material gets on the skin, quickly cool with water or physiological saline. Apply mineral oil or petroleum jelly after the skin is cooled to facilitate removal of the solidified material. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it. Get medical treatment for extensive burns

INGESTION

DO NOT INDUCE VOMITING. No specific first aid measures are required because this material is not expected to be harmful if swallowed. As a precaution and if conscious, give the person a glass of water or milk to drink and get medical advice.

INHALATION

Removed exposed person to fresh air if adverse effects are observed.

ADDITIONAL INFORMATION

Note to physician: Treat Symptomatically.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION

OSHA Classification (29 CFR 1910.1200): Not classified as flammable or combustible.

FLAMMABLE PROPERTIES

Flash Point (COC) : 235 °C Auto Ignition : NDA

Flammability Limits (% by volume in air): Lower: NDA, Upper: NDA Extinguishing Media $: CO_2$, dry chemical, foam, and water fog

NFPA Ratings: Health 2; Flammability 1; Reactivity 0

FIRE FIGHTING INSTRUCTIONS

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

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UNUSUAL FIRE AND EXPLOSION HAZARDS

Normal combustion forms carbon dioxide and water vapor and may produce oxides of Ca, P, N, S, B, Mo, Zn. Incomplete combustion can produce carbon monoxide which is considered toxic as oxygen insufficiency may occur.

6. ACCIDENTAL RELEASE MEASURE

ACCIDENTAL RELEASE MEASURES

If heated material is spilled, allow it to cool before proceeding with disposal methods.

Personal Protective Equipment must be worn. Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Control /Personal Protection. Contain liquid to prevent further contamination of soil, sewer and waterways. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

Check under Transportation and Labelling (DOT/CERLA) and Other Regulatory Information Section.

7. HANDLING AND STORAGE

Caution handling must be applied when draining oil from high temperature engine. It may reach above 90°C. Protective glove must be worn. Anticipation of splash to eyes should be taken.

Do not breathe vapor or fumes.

Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Do not litter oil container to the environment as it containers retain product residue.

Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or disposed of.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS

Consider the high temperature operation of engine, oil draining without cooling engine may potentially release burnt smell, fume. Individual may react skin irritation in different ways when warn oil come into skin contact.

PERSONAL PROTECTIVE EQUIPMENT (EYE/FACE PROTECTION)

Safety glasses, chemical goggles, or face shields are recommended to prevent contact.

SKIN PROTECTION

Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION

Yellow liquid with petroleum odor.

pH : N/A
Vapor pressure : N/A
Vapor density (AIR= 1) : N/A
Boiling Point : N/A
Freezing Point : N/A
Melting Point : N/A

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Pour Point : -15 $^{\circ}$ C Flash Point : 235 $^{\circ}$ C

Solubility : Insoluble in water
Density : 0.8740 Kg/L, @ 15 °C

Viscosity @ 40 °C : 68.10 cSt

10. STABILITY AND REACTIVITY

DECOMPOSITION PRODUCTS

Smoke, Carbon monoxide, Carbon dioxide, Aldehydes, and other products of incomplete combustion.

PRODUCT STABILITY

Stable at room temperature and pressure.

INCOMPATIBILITY WITH OTHER MATERIALS

Halogen, halogenated compounds, strong oxidizing agent of peroxide, Nitrates, peroxides, etc.

POLYMERIZATION

Will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS

Light to moderate eye irritation. Based on data from components and similar materials.

SKIN EFFECTS

No skin irritation is expected.

ACUTE ORAL EFFECTS

The LD 50 in rats is > 6500 mg/kg. Based on data from components or similar materials.

ACUTE INHALATION EFFECTS

Not expected to be a toxic inhalation hazard.

ADDITIONAL TOXICOLOGY INFORMATION

No data available to indicate products or components may be a skin sensitizer.

No data available to indicate products or components may be respiratory sensitizer.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

ENVIROMENTAL FATE

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

13. DISPOSAL CONSIDERATIONS

Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this materials.



14. TRANSPORTATION INFORMATION

The description shown may not apply to all shipping situations.

DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT

DOT HAZARD CLASS : NOT APPLICABLE

DOT IDENTIFICATION NUMBER: NOT APPLICABLE

DOT PACKING GROUP: NOT APPLICABLE

15. REGULATORY INFORMATION

SARA 311 CATEGORIES

Immediate (Acute) Health Effects : YES
 Delayed (Chronic) Health Effects : NO
 Fire Hazard : NO
 Sudden Release of pressure Hazard : NO
 Reactivity Hazard : NO

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT

TLV : Threshold Limit Value TWA : Time Weighted Average
STEL : Short-term Exposure Limit TPQ : Threshold Planning Company
RQ : Reportable Quantity PEL : Permissible Exposure Limit

C : Ceiling Limit CAS : Chemical Abstract Service Number

A1-5 : Appendix A Categories () : Change has been proposed

NDA : No Data Available NA : Not Applicable

16. OTHER INFORMATION

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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