

GEARFLUID 2K

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product Name	GEARFLUID 2K
Product Type	Petroleum Hydrocarbons with Additives
Recommended Use	Asphalt-Based Gear Lubricant
Company Information	PETRON CORPORATION JESUS ST., PANDACAN, MANILA PHILIPPINES
General Contact Numbers	(02) 8-884-9200
Website	www.petron.com

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION	Acute Toxicity - Oral, Category 5 Acute Toxicity - Dermal, Category 5 Acute Toxicity - Inhalation, Category 5 Skin Corrosion/Irritation, Category 3 Carcinogenicity, Category 2 Specific Target Organ Toxicity (Single Exposure), Category 3 Aspiration Hazard, Category 2 Hazardous to the aquatic environment - Chronic hazard, Category 4
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GHS LABELING

Symbol(s)



Signal Word Warning

Hazard Statements	H303	Maybe harmful if swallowed
	H313	Maybe harmful in contact with skin
	H333	Maybe harmful if inhaled
	H316	Causes mild skin irritation
	H351	Suspected of causing cancer
	H336	May cause drowsiness and dizziness
	H305	Maybe harmful if swallowed and enters airways
	H401	Toxic to aquatic life
H413	May cause long lasting harmful effects to aquatic life	

PRECAUTIONARY STATEMENTS

General Precautionary Statements

P101	If medical advice is needed, have product container or label at hand
P102	Keep out of reach of children
P103	Read label before use

Prevention Precautionary Statements

P203 Obtain, read and follow all safety instructions before use
 P261 Avoid breathing fume/gas/vapors
 P271 Use only outdoors or in a well-ventilated area
 P273 Avoid release to the environment
 P281 Use personal protective equipment as required

Response Precautionary Statements

P301 + P317 + P331 IF SWALLOWED: Get medical help. Do not induce vomiting
 P304 + P317 IF INHALED: Get medical help
 P304 + P340 + P317 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical help.
 P332 + P317 If skin irritation occurs: Get medical help.

Storage Precautionary Statements

P403 + 233 Store in a well-ventilated place. Keep container tightly closed
 P405 Store locked up

Disposal Precautionary Statement

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition	CAS Number	% Weight
Bitumen	8052-42-4	65 - 75
Residual oil (petroleum) solvent dewaxed	64742-62-7	10 - 15
Distillates (Petroleum) solvent refined heavy paraffinic	64741-88-4	10 - 15
Trichloroethylene	79-01-6	7 - 10

In general, the product contain components that may be a significant health and safety hazard thus proper handling petroleum products and observing precautions must be observed and good standards of industrial and personal hygiene must be maintained.

SECTION 4: FIRST AID MEASURES

Eye Contact Immediately flush eyes with large amount of water for at least 15 minutes or until irritation subsides. If irritation persists, get prompt medical attention.

Skin Contact Immediately flush with large amount of water; use soap if available. Remove contaminated clothing and shoes, and launder before reuse.

Ingestion If swallowed, DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get immediate medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

Inhalation This product is not expected to present an inhalation problem at ambient temperature. However, if overexposed to oil mist, using proper respiratory protection, immediately remove the affected person immediately to fresh air. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.



SECTION 5: FIRE-FIGHTING MEASURES

Flash Point, °C	160
Extinguishing Media	In case of fire use foam, carbon dioxide or dry chemical extinguishers.
Special Fire-fighting Procedures	Water jets should not be used directly on igniting products. Avoid spraying water directly into storage containers due to danger of over-boil. However, water may be used to cool exposed containers, structures and equipment adjacent to fire. Respiratory and eye protection required for fire-fighting personnel.
Decomposition Products Under Fire Conditions	Fumes, smoke, oxides of sulfur, nitrogen, carbon and other toxic gases may be formed.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Land Spill	Taking normal safety precaution, eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills, implement cleanup procedures. For large spills, implement clean-up procedures and, if in public area, keep public away and advise authorities. Prevent liquid from entering sewers, water courses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with a suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
Water Spill	Use booms to confine spills immediately. Remove from water surface by skimming or with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 7: HANDLING AND STORAGE

Handling Procedures	Keep away from potential sources of ignition. Open container in a well ventilated area. Avoid breathing vapors. Keep containers closed when not in use. Wash thoroughly after handling. "Empty" containers with retained product residue (liquid or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity or other sources of ignition; they may explode and cause death or injury. Empty drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner, or properly disposed off.
Storage Procedures	Do not store near potential sources of ignition. Store in a well-ventilated area. Odorous and toxic fumes may form from the decomposition of this product if stored at temperatures in excess of 60°C for extended periods of time or if heat sources in excess of 70°C are used.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Controls

Components	CAS-No.	Source	Value
Bitumen	8052-42-4	ACGIH	200 ppm, TLV



Residual oil (petroleum) solvent dewaxed	64742-62-7	ACGIH	5mg/m ³
		OSHA	10 mg/m ³ (STEL) 5mg/m ³
Distillates (Petroleum) solvent refined heavy paraffinic	64741-88-4	ACGIH	5mg/m ³
		OSHA	10 mg/m ³ (STEL) 5mg/m ³
Trichloro Ethylene	79-01-6	ACGIH	200 ppm

Personal Protection

Ventilation Procedures	The use of local exhaust ventilation is recommended to control mists or vapors. Additional ventilation or exhaust may be required to maintain air concentrations below exposure limits.
Respiratory Protection	Use NIOSH/OSHA approved full-face respirator with a combination organic vapor and high efficiency filter cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
Hand Protection	Use chemical resistant gloves.
Eye Protection	Where contact may occur, wear safety glasses with side shields.
Clothing Recommendation	Wear either a chemical protective suit or apron when potential for contact with material exists. Use neoprene or nitrile rubber boots when necessary to avoid contaminating shoes. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black viscous liquid
Odor	Characteristic of Petroleum odor
Density at 15°C, kg/L	0.9952
Flash Point, °C	160
pH	No Data
Boiling Point, °C	No Data
Melting Point, °C	No Data
Vapor Pressure, kPa	No Data
Vapor Density	No Data
Solubility in Water	Insoluble
Evaporation Rate	No Data
Flammability	Non flammable
Partition Coefficient	No Data
Auto-ignition Temp, °C	No Data
Decomposition Temp, °C	No Data
Explosion limits	No Data

SECTION 10: STABILITY AND REACTIVITY



Stability	This product is stable and hazardous polymerization will not occur. However, the product should not be heated above 70°C to avoid possible release of highly toxic hydrogen sulfide and odorous alkyl mercaptans.
Incompatibility	Strong oxidizing agents
Polymerization	Not Applicable
Hazardous Decomposition Products	Thermal decomposition and combustion produce noxious fumes containing oxides of carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity

Bitumen	Oral, LD50	>5000 mg/kg
	Dermal, LD50	>2000 mg/kg
Residual oil (petroleum) solvent dewaxed	Oral, LD50	>5000 mg/kg
	Dermal, LD50	>2000 mg/kg
	Inhalation, LC50	>4 mg/L
Trichloroethylene	Oral, LD50	4290 mg/kg
	Dermal, LD50	20 ml/kg
	Inhalation, LC50	8000 ppm/1hr
Distillates (Petroleum) solvent refined heavy paraffinic	Oral, LD50	>5000 mg/kg
	Dermal, LD50	>2000 mg/kg
	Inhalation, LC50	2.18 mg/L air

Skin Corrosion/Irritation Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness and swelling. Other than the potential skin irritation effects noted above, acute (short term) adverse effects are not expected from brief skin contact. Prolonged, widespread, or repeated skin contact may result in the absorption of potentially harmful amounts of material.

Serious Eye Damage/Irritation May cause irritation, experienced as discomfort or pain, and seen as excess redness and swelling of the eye, and possible injury to the cornea.

Respiratory/Skin Sensitization There was no evidence of skin sensitization when the product was applied to human skin.

Germ Cell Mutagenicity Extracts of asphalt tested in a modified Ames Assay gave negative or slightly positive findings (mutagenicity index <1.5). Fume condensates derived from heating asphalt to high temperatures (>450°F) were moderately mutagenic (mutagenicity index 4-9). By comparison, fumes generated by heating coal tar pitch were >1,000 times more mutagenic in the Ames Assay than asphalt.

Aspiration Hazard Ingestion is an unlikely event. However, if more than several mouthfuls are swallowed, abdominal discomfort, nausea, and diarrhea may occur.

Carcinogenicity The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence to classify extracts of bitumens (the primary components of asphalt) as carcinogenic in experimental animals. Studies on workers exposed to asphalt fumes have not produced conclusive evidence of an increased risk of cancer. Some epidemiologic studies have shown no increased risk of cancer among exposed workers, while other studies show a slightly increased risk of lung, other respiratory tract and gastrointestinal



tract cancers. In those studies where an increased risk of cancer was reported, a number of the workers who were included in the studies also may have been exposed to coal tar products other than asphalt. Consequently, the increased risk may not be exclusively attributable to exposure to asphalt fumes.

Dermal applications of undiluted (hot) asphalt experimental animals have reportedly produced tumors at the site of application. However, these findings should be interpreted with caution because the applications may have caused burns and irritation that could have been related to tumor production. Solvent dilutions of different types of asphalt have been evaluated in chronic skin painting studies. Condensates of asphalt fumes diluted in solvent have been evaluated in skin painting studies. The conditions under which these studies were conducted may not be representative of the conditions to which people working with these materials are likely to be exposed. However, exposure to asphalt can produce skin irritation in people who get these materials on their skin.

Distillates (Petroleum) solvent refined heavy paraffinic

Suspected of causing cancer
Classified by EU, Institute for Health & Consumer Protection as Carcinogenic Category 2; INCHEM similarly classifies as may cause cancer.

Reproductive Toxicity

No relevant data identified from the literature searched.

Specific Target Organ Toxicity

Negligible hazard under ambient temperature conditions (-18 to 38°C; 0 to 100°F). If overheated especially in the presence of water, hydrogen sulfide may be released. This can cause respiratory collapse, coma, even death without necessarily any odor being sensed. Avoid breathing vapor or mists. Repeated and prolonged over-exposure to oil mists may result in droplet deposition, oil granuloma formation, inflammation and increased incidence of infection.

SECTION 12: ECOLOGICAL INFORMATION

Acute Toxicity

Distillates (Petroleum) solvent-refined heavy paraffinic

Fish (LL ₅₀ /96-hours)	>100 mg/L (Pimephales promelas)
Crustaceans (EL ₅₀ /48-hours)	1000 mg/L (Daphnia magna)
Algae (EC ₅₀ /72-hours)	>1000 mg/L (Scenedesmus subspicatus)

Residual oil (petroleum) solvent dewaxed

Fish (LC ₅₀ /96-hours)	>5000 mg/L (Oncorhynchus mykiss)
Crustaceans (EC ₅₀ /48 hours)	>1000 mg/L (Daphnia magna)

Trichloroethylene

Fish (LC ₅₀ /48-hours)	60 mg/L (Brachydanio rerio)
Crustaceans (EC ₅₀ /48-hours)	58 mg/L (Daphnia cucullata)
Algae (EC ₅₀ /96-hours)	450 mg/L (Scenedesmus sp.)

Environmental Mobility

This product floats and can migrate from water to land.

Environmental Degradability

Data have not been determined specifically for this product, but it is not expected that it will be "readily" biodegradable.



Ecotoxicity & Bioaccumulation Data have not been determined specifically for this product, but it is expected to be harmful to aquatic organisms.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Material, if discarded, is expected to be hazardous waste. The product may be burned under controlled conditions and should be in compliance with local and national waste management regulations.

SECTION 14: TRANSPORT INFORMATION

Land This product is not regulated for road/rail transport.

Sea IMDG (Packaged Goods and BLCs). This product is not regulated for sea transport.

Air (ICAO/IATA). This product is not regulated for air transport.

SECTION 15: REGULATORY INFORMATION

The chemical substances present in this product are listed under Philippine Inventory of Chemicals and Chemical Substances (PICCS).

SECTION 16: OTHER INFORMATION

Approvals Research and Development Technical Department
Petron Corporation

This safety data sheet contains the following revisions: **4**

This is a computer-generated form and does not require a signature.

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