



MATERIAL SAFETY DATA SHEET

Phillips 66 X/C 45 Aviation Grease

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Phillips 66 X/C 45 Aviation Grease
Product Code: None
Chemical Family: Not Given

Responsible Party: 66 Aviation Products
A Division of ConocoPhillips
600 N. Dairy Ashford
Houston, Texas
77079-1175

Customer Service: 918-661-5355
Technical Information: 918-661-5355

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:

Spill, Leak, Fire or Accident Call CHEMTREC:
North America: (800) 424-9300
Others: (703) 527-3887 (collect)

California Poison Control System: (800) 356-3219

Health Hazards/Precautionary Measures: A component is harmful or fatal if inhaled. A component is harmful if swallowed. A component causes severe eye irritation. Use ventilation adequate to keep exposure below recommended limits, if any. Do not breathe vapor or mist. Avoid contact with eyes skin and clothing. Wash thoroughly after handling. Do not taste or swallow.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance: Amber
Physical Form: Semi-Solid Gel
Odor: Characteristic petroleum

NFPA 704 Hazard Class:

Health: 2 (Moderate)
Flammability: 1 (Slight)
Instability: 0 (Least)

HMIS Hazard Class:

Health: 2 (Moderate)
Flammability: 1 (Slight)
Physical Hazards: 0 (Least)

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS					
Component / CAS No:	Percent (%)	ACGIH:	OSHA:	NIOSH:	Other:
Acetone 67-64-1	3-5	500ppm TWA 750ppm STEL	1000 ppm TWA	NE	
Sodium Nitrite 7632-00-0	3-5	NE	NE	NE	

NON-HAZARDOUS COMPONENTS					
Component / CAS No:	Percent (%)	ACGIH:	OSHA:	NIOSH:	Other:
Additives PROPRIETARY	10-14	NE	NE	NE	
Lubricant Base Oil (Petroleum) VARIOUS	80	5mg/m ³ TWA 10 mg/m ³ STEL	5 mg/m ³ TWA	2500 mg/m ³ IDLH	as Oil Mist, if Generated 5 mg/m ³ NOHSC TWA

All components are listed on the TSCA inventory.

The base oil for this product can be a mixture of any of the following highly refined petroleum streams: CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS 64742-63-8; CAS 64742-65-0; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM.
NE=Not Established

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: A component of this material is a severe eye irritant. Contact may cause stinging, watering, redness, swelling, and eye damage.

Skin: Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): A component of this material is highly toxic. May be harmful or fatal if inhaled.

Ingestion (Swallowing): A component of this material is toxic. May be harmful if swallowed.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, headaches, nausea, vomiting, sweating, diarrhea, breathing difficulties, irregular heartbeats (arrhythmias), hypotension (low blood pressure), cyanosis (bluish discoloration of the skin), blood disorders (methemoglobinemia), visual disturbances, respiratory failure, and transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue).

Cancer: Inadequate evidence available to evaluate the cancer hazard of this material. See Section 11 for carcinogenicity information of individual components, if any.

Target Organs: No data available for this material.

Developmental: Inadequate data available for this material.

Other Comments: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders, heart disorders, respiratory (asthma-like) disorders.

4. FIRST AID MEASURES

Eye: Immediately move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek immediate medical attention. For direct contact, immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 20 minutes. Seek immediate medical attention.

Skin: Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): Immediately move victim away from exposure and into fresh air. If respiratory symptoms or other symptoms of exposure develop, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): If swallowed, seek emergency medical attention. If victim is drowsy or unconscious and vomiting, place on the left side with the head down and do not give anything by mouth. If victim is conscious and alert and ingestion occurred within the last hour, vomiting should be induced for ingestions of more than 1 swallow (1-2 tablespoons for an adult) preferably under direction from a physician or poison center. If possible, do not leave victim unattended and observe closely for adequacy of breathing.

Notes to Physician: High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

5. FIRE-FIGHTING MEASURES

Flammable Properties:

Flash Point:	550°F / 288°C
Test Method:	(COC)
OSHA Flammability Class:	Not regulated
LEL%:	No data
UEL%:	No data
Autoignition Temperature:	No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily.

Extinguishing Media: Dry chemical, carbon dioxide, foam, water, sand, or earth is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Move undamaged containers from immediate hazard area if it can be done with minimal risk. Isolate immediate hazard area, keep unauthorized personnel out. Contain spill if it can be done with minimal risk.

Cool equipment exposed to fire with water, if it can be done with minimal risk.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release.

Stay upwind and away from spill. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Stay upwind and away from spill/release.

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways.

Notify fire authorities and appropriate federal, state, and local agencies. Cleanup under expert supervision is advised. Minimize dust generation. Sweep up and package appropriately for disposal. Notify appropriate federal, state, and local agencies.

7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Use and store this material in cool, dry, well-ventilated areas. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required.

Personal Protective Equipment (PPE):

Respiratory: Inhalation is not an expected route of exposure. However, a NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation, and skin damage (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers may be necessary.

Eye/Face: The use of a face shield and chemical goggles to safeguard against potential eye contact, irritation, or injury is recommended.

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance:	Amber
Physical Form:	Semi-Solid Gel
Odor:	Characteristic petroleum
pH:	Not applicable
Vapor Pressure (mm Hg):	<1
Vapor Density (air=1):	>1
Solubility in Water:	Negligible
Bulk Density:	8.0
Percent Volatile:	Negligible
Evaporation Rate (nBuAc=1):	<1
Flash Point:	550°F / 288°C

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: Avoid high temperatures and all sources of ignition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents, strong acids, and strong bases.

Hazardous Decomposition Products: Combustion can yield carbon dioxide and carbon monoxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Chronic Data:

Lubricant Base Oil (Petroleum) - VARIOUS

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating, and dewaxing to remove aromatics and improve performance characteristics. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA.

Acute Data:

Acetone - 67-64-1

Dermal LD50 = >9400 uL/kg (g.pig)
LC50 = 44 g/m³/4H (mice), 50.1 g/kg/8H
Oral LD50 = 3 g/kg (mice), 5.8 g/kg (rat), 5.3 g/kg (rabbit)

Sodium Nitrite - 7632-00-0

Dermal LD50 = No information available
LC50 = 5.5 mg/m³/4H (rat)
Oral LD50 = 180 mg/kg (rat), 175 mg/kg (mouse), 186 mg/kg (rabbit)

Additives - PROPRIETARY

Dermal LD50 = No information available
LC50 = No information available
Oral LD50 = No information available

Lubricant Base Oil (Petroleum) - VARIOUS

Dermal LD50 = >2 g/kg
LC50 = No information available
Oral LD50 = >5 g/kg

12. ECOLOGICAL INFORMATION

Not evaluated at this time.

13. DISPOSAL CONSIDERATIONS

This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

Contents should be completely used and containers emptied prior to discard. Rinsate may be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or a drum reconditioner. To assure proper disposal of small empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORTATION INFORMATION

DOT Shipping Description: Not classified as hazardous

Note: Material is unregulated unless in container of 3500 gallons or more, then provisions of 49 CFR Part 130 apply for land shipment.

IMDG Shipping Description: Not regulated

ICAO/IATA Shipping Description: Not regulated

15. REGULATORY INFORMATION

U.S. Regulations:

EPA SARA 311/312 (Title III Hazard Categories)

Acute Health:	Yes
Chronic Health:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

SARA - Section 313 and 49 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:
Sodium nitrite 1-5%

EPA (CERCLA) Reportable Quantity:

--None Known--

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs

This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:
-- None Known --

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):
-- None Known --

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

TSCA:

All components are listed on the TSCA inventory.

Canadian Regulations:**Domestic Substances List:**

Listed

WHMIS Classification:

D-Poisonous and Infectious Material

D1B-Materials causing immediate and serious toxic effects - Toxic Material

D2A-Materials causing other toxic effects - Very Toxic Material

D2B-Materials causing other toxic effects - Toxic Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

International Regulations:

One or more components are listed on the following inventories:

Australia (AICS)

Europe (EINECS)

Korea (TCCL)

Japan (METI / MOL)

Philippines (PICCS)

16. OTHER INFORMATION

Issue/Revision Date:	21-Jun-2004
Previous Issue Date:	None
Reason for revision:	New MSDS
MSDS Code:	778523

Disclaimer of Expressed and implied Warranties:

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.