

<h1>Solutia Inc.</h1> <h2>Material Safety Data Sheet</h2>
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: SKYDROL® 5 Hydraulic fluid

Reference Number: 000000000181

Date: 08/14/2007

#### Company Information:

##### United States:

Solutia Inc.  
575 Maryville Center Drive, P.O. Box 66760  
St. Louis, MO 63166-6760  
Emergency telephone: Chemtrec: 1-800-424-9300  
International Emergency telephone: Chemtrec: 703-527-3887  
Non-Emergency telephone: 1-314-674-6661

##### Canada:

Solutia Canada Inc.  
6800 St. Patrick Street  
LaSalle, PQ H8N 2H3  
Emergency telephone: CANUTEC: 1-613-996-6666  
Non-Emergency telephone: 1-314-674-6661

##### Mexico:

Solutia MEXICO, S. DE R.L. DE C.V.  
Prol. Paseo de la Reforma 2654  
Local 501, Piso-5  
Col. Lomas Altas  
11950 Mexico, D.F.  
Emergency telephone: SETIQ: (in Mexico) 01-800-002-1400  
Non-Emergency telephone: (in Mexico) 01-55-5259-6800

##### Brazil:

Solutia Brazil Ltd.  
Avenue Carlos Marcondes, 1200  
CEP: 12241-420-São José dos Campos/SP-Brazil  
Emergency telephone: 55 12 3932 7100 (PABX)  
Non-Emergency telephone: 55 11 3146 1800 (PABX)

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Form:	oily liquid
Colour:	purple
Odour:	odourless

#### WARNING STATEMENTS

##### CAUTION!

May cause eye irritation  
May cause skin irritation

#### POTENTIAL HEALTH EFFECTS

Likely routes of exposure: eye and skin contact

Eye contact: Moderately irritating to eyes.

Skin contact: Moderately irritating to skin.  
No more than slightly toxic if absorbed.

Inhalation: Elevated processing temperatures may cause release of vapours which are irritating if inhaled.  
No more than slightly toxic if inhaled.

Ingestion: No more than slightly toxic if swallowed.  
Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Refer to Section 11 for toxicological information.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS No.</u>	<u>Average concentration</u>	<u>Concentration range</u>	<u>Units</u>
triisobutyl phosphate	126-71-6		60.0 - 100.0	%
triphenyl phosphate	115-86-6		1.0 - 5.0	%
2-ethylhexyl 7-oxabicyclo[4.1.0] heptane-3-carboxylate	62256-00-2		<=10.0	%

### 4. FIRST AID MEASURES

If in eyes: Immediately flush with plenty of water.  
If easy to do, remove any contact lenses.  
Get medical attention if irritation persists.  
Remove material from skin and clothing.

If on skin: Immediately flush the area with plenty of water.  
Remove contaminated clothing.  
Wash skin gently with soap as soon as it is available.  
Get medical attention if irritation persists.  
Wash contaminated clothing before re-use.

If inhaled: Immediate first aid is not likely to be required.  
If symptoms occur, remove to fresh air.  
Remove material from eyes, skin and clothing.

If swallowed: Immediate first aid is not likely to be required.  
A physician or Poison Control Center can be contacted for advice.  
Wash heavily contaminated clothing before reuse.

Notes to physicians: After flushing eyes for at least 15 minutes, ophthalmic preparations of sterile mineral or castor oil may be instilled one time in the exposed eye for relief of pain.

## 5. FIRE FIGHTING MEASURES

Fire point:	183 C	ASTM D-92
Hazardous products of combustion:	soot; smoke; carbon monoxide (CO); carbon dioxide; phosphorus oxides (PxOy)	
Extinguishing media:	Water spray, foam, dry chemical, or carbon dioxide	
Unusual fire and explosion hazards:	None known	
Fire fighting equipment:	Firefighters, and others exposed, wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.	

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use personal protection recommended in section 8.
Environmental precautions:	Keep out of drains and water courses.
Methods for cleaning up:	Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with eyes, skin and clothing.  
Wash thoroughly after handling.

Emptied containers retain vapour and product residue. Observe all recommended safety precautions until container is cleaned, reconditioned or destroyed. The reuse of this material's container for non industrial purposes is prohibited and any reuse must be in consideration of the data provided in this material safety data sheet.

### Storage

General: Stable under normal conditions of handling and storage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits: (ml/m<sup>3</sup> = ppm)

SKYDROL® 5 No specific occupational exposure limit has been established.

triphenyl phosphate ACGIH TLV: 3 mg/m<sup>3</sup> ; ; 8-hr TWA  
OSHA PEL: 3 mg/m<sup>3</sup> ; ; 8-hr TWA  
Mexican OEL: 3 mg/m<sup>3</sup> ; ; 8-hr TWA  
Mexican OEL: 6 mg/m<sup>3</sup> ; ; 15-min STEL

Eye protection: Wear chemical goggles.  
Have eye flushing equipment available.

- Hand protection:** Wear chemical resistant gloves.  
Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.
- Body protection:** Wear suitable protective clothing.  
Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.  
Wear full protective clothing if exposed to splashes.  
Wash contaminated skin promptly.  
Launder contaminated clothing and clean protective equipment before reuse.  
Wash thoroughly after handling.
- Respiratory protection:** Avoid breathing vapour or mist.  
Use approved respiratory protection equipment (full facepiece recommended) when airborne exposure limits are exceeded.  
Consult the respirator manufacturer to determine the appropriate type of equipment for a given application.  
Observe respirator use limitations specified by the manufacturer.
- Ventilation:** Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits.  
If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment.

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Flash point:	159 C	ASTM D-92
Autoignition temperature:	466 C	ASTM D-2155
Specific gravity:	0.977 @ 25 C	
Kinematic viscosity:	2,085 cSt @ -54 C 9 cSt @ 38 C 3 cSt @ 99 C	

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

## 10. STABILITY AND REACTIVITY

- Conditions to avoid:** Elevated temperatures
- Materials to avoid:** Contact with strong oxidizing agents.
- Hazardous reactions:** Hazardous polymerization does not occur.
- Hazardous decomposition products:** carbon monoxide (CO); phosphorus oxides (P<sub>x</sub>O<sub>y</sub>)

## 11. TOXICOLOGICAL INFORMATION

Solutia has not conducted acute oral or skin application toxicity studies on this product and no data were obtained in a search of the available scientific literature. Results of single exposure (acute) toxicity studies conducted on similar materials indicate that these products are practically nontoxic orally (rats) and after skin application (rabbits). Results from Solutia sponsored studies or from the available public literature are described below.

Skin irritation: rabbit , Severely irritating, 24 h

### Components

Data from Solutia studies and/or the available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200) or the Canadian Hazardous Products Act are discussed below if present.

triisobutyl phosphate	Practically nontoxic following oral administration. Practically nontoxic after skin application in animal studies. Practically non irritating to eyes (rabbit). Moderately irritating to skin (rabbit). Produced effects on body weight, serum enzymes and/or organ weights in repeat dose studies. No neurotoxic esterase inhibition was observed in animal models. The weight of the evidence indicates that this material is not mutagenic in in-vitro assays. The weight of the evidence indicates that this material is not mutagenic in in vivo assays.
triphenyl phosphate	Practically nontoxic following oral administration. Practically nontoxic after skin application in animal studies. Practically non irritating to skin (rabbit). Practically non irritating to eyes (rabbit). No delayed neurotoxicity was observed in animal models. Not carcinogenic. No birth defects were noted in rats given the active ingredient orally during pregnancy. The weight of the evidence indicates that this material is not mutagenic in in-vitro assays. Produced cholinesterase inhibition (brain, blood cell, and/or plasma) without signs of overt enzyme inhibition.
2-ethylhexyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate	Slightly toxic following oral administration. Practically nontoxic after skin application in animal studies. Practically non irritating to eyes (rabbit). Slightly irritating to skin (rabbit). No mortality or signs of toxicity at the highest level tested. Produced dermal sensitization (guinea pigs). The weight of the evidence indicates that this material is not mutagenic in in-vitro assays. The weight of the evidence indicates that this material is mutagenic in in vivo assays.

## 12. ECOLOGICAL INFORMATION

This product has not been tested for environmental toxicity or biodegradation, but data obtained on a similar products are summarized below:

### Environmental Toxicity

Invertebrates	48 h, EC50	Water flea ( <i>Daphnia magna</i> )	50.5 mg/l
		Result for structurally similar chemical.	
Fish:	96 h, LC50	Rainbow trout ( <i>Oncorhynchus mykiss</i> )	23 mg/l
		Result for structurally similar chemical.	

## 13. DISPOSAL CONSIDERATIONS

US EPA RCRA Status: This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261.

Disposal considerations: Recycle  
Incineration

Miscellaneous advice: This product meets the criteria for a synthetic used oil under the U.S. EPA Standards for the Management of Used Oil (40 CFR 279). Those standards govern recycling and disposal in lieu of 40 CFR 260 -272 of the Federal hazardous waste program in states that have adopted these used oil regulations. Consult your attorney or appropriate regulatory official to be sure these standards have been adopted in your state. Recycle or burn in accordance with the applicable standards.  
Local, state, provincial, and national disposal regulations may be more or less stringent. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

Container Disposal: Empty packages completely.

## 14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

### US DOT

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
*triphenyl phosphate*

Hazard Class: 9

Hazard Identification number: UN3082

Packing Group: Packing Group III

Transport label: Class 9

Special provisions: This material meets the definition of a marine pollutant.

### Canadian TDG

Special provisions: This material meets the definition of a marine pollutant.

Other: Not regulated for transport.

### ICAO/IATA Class

Other: This material is not regulated under IATA or ICAO for air transportation.

## 15. REGULATORY INFORMATION

All components are in compliance with the following inventories: U.S. TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Japanese ENCS, Chinese

Canadian WHMIS classification: D2(B) - Materials Causing Other Toxic Effects

SARA Hazard Notification:

Hazard Categories Under Title III Rules (40 CFR 370): Immediate

Section 302 Extremely Hazardous Substances: Not applicable

Section 313 Toxic Chemical(s): Not applicable

CERCLA Reportable Quantity:

Not applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

Safety data sheet also created in accordance with Brazilian law NBR 14725

## 16. OTHER INFORMATION

Product use: Hydraulic fluids and additives

Reason for revision: Minor changes :, Section 16

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	1	1	0	
Suggested HMIS Rating:	1	1	0	B

Prepared by the Solutia Hazard Communication Group. Please consult Solutia @ 314-674-6661 if further information is needed.

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