

# Skydrol® 5 Hydraulic Fluid

0046276545

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06/18/2019

 1.2
 01/14/2020
 150000093407
 Date of first issue: 09/06/2016

 PRD
 SDSUS / Z8 / 0260
 NCD / 0039385629 / 0001033509

#### **SECTION 1. IDENTIFICATION**

Product name : Skydrol® 5 Hydraulic Fluid

Product code : P3410004

Manufacturer or supplier's details

Company name of supplier : Solutia Inc.

A Subsidiary of Eastman Chemical Company

Address : 575 Maryville Centre Drive

Saint Louis MO 63141

Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use

Recommended use : Hydraulic fluids

Restrictions on use : None known.

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS classification in accordance with 29 CFR 1910.1200

Skin sensitization : Category 1

**GHS** label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.

Precautionary Statements : Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing must not be allowed out of

the workplace.

P280 Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P363 Wash contaminated clothing before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-



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posal plant.

#### Other hazards

None known.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

## Components

Chemical name	CAS-No.	Concentration (% w/w)
Triisobutyl phosphate	126-71-6	60 - 100
7-Oxabicyclo[4.1.0]heptane-3-	62256-00-2	0 - 10
carboxylic acid, 2-ethylhexyl ester		
tert-Butylphenyl diphenyl phosphate	56803-37-3	1 - 5
triphenylphosphate	115-86-6	1 - 5
butylated hydroxytoluene	128-37-0	0.1 - 1

#### **SECTION 4. FIRST AID MEASURES**

If inhaled : Move to fresh air.

If breathing is difficult, give oxygen. Consult a physician if necessary.

In case of skin contact : Wash off immediately with plenty of water for at least 15

minutes.

Get medical attention if symptoms occur. Wash contaminated clothing before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

Get medical attention if symptoms occur.

If swallowed : Call a physician or poison control center immediately.

Do not induce vomiting without medical advice.

Rinse mouth.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

May cause an allergic skin reaction.

Notes to physician : Treat symptomatically.

### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Carbon dioxide (CO2)

Dry chemical Foam

Unsuitable extinguishing

media

Do not use a solid water stream as it may scatter and spread

fire.



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Hazardous combustion prod-

Carbon monoxide Carbon dioxide (CO2) oxides of phosphorus

Use a water spray to cool fully closed containers. Further information

Do not allow run-off from fire fighting to enter drains or water

courses.

Special protective equipment :

for fire-fighters

Wear an approved positive pressure self-contained breathing

apparatus in addition to standard fire fighting gear.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Ventilate the area.

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

Avoid contact with skin and eyes. Material can create slippery conditions.

Wear appropriate personal protective equipment.

Local authorities should be advised if significant spillages

cannot be contained.

**Environmental precautions** Clear up spills immediately and dispose of waste safely.

Avoid release to the environment.

Collect spillage.

Methods and materials for

containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material. (e.g. sand. earth. diatomaceous earth. vermiculite)

and transfer to a container for disposal according to local /

national regulations (see section 13).

## **SECTION 7. HANDLING AND STORAGE**

Do not breathe vapors or spray mist. Advice on safe handling

Handle product only in closed system or provide appropriate

exhaust ventilation at machinery.

In case of insufficient ventilation, wear suitable respiratory

equipment.

Wear appropriate personal protective equipment.

Avoid contact with skin, eyes and clothing.

Wash thoroughly after handling.

Wash contaminated clothing before reuse.

Drain or remove substance from equipment prior to break-in

or maintenance.

Handle in accordance with good industrial hygiene and safety

practice.

Conditions for safe storage Store locked up.

Keep container tightly closed in a dry and well-ventilated

place.

Keep in a cool place away from oxidizing agents.



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#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
triphenylphosphate	115-86-6	TWA	3 mg/m3	ACGIH
		TWA	3 mg/m3	NIOSH REL
		TWA	3 mg/m3	OSHA Z-1
		TWA	3 mg/m3	OSHA P0

**Engineering measures** : Good general ventilation (typically 10 air changes per hour)

should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne

levels to an acceptable level.

Personal protective equipment

Respiratory protection : Use a properly fitted, particulate filter respirator complying

with an approved standard if a risk assessment indicates this

is necessary.

Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.

If engineering controls do not maintain airborne

concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved

respirator must be worn.

Hand protection

Remarks : Wear suitable gloves. Contact the glove manufacturer for

specific advice on glove selection and breakthrough times for your use conditions. After contamination with product change the gloves immediately and dispose of them according to

relevant national and local regulations.

Eye protection : Wear safety glasses with side shields (or goggles).

Skin and body protection : Wear suitable protective clothing.

Protective measures : Ensure that eye flushing systems and safety showers are

located close to the working place.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES** 

Appearance : oily



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Color : purple

Odor : odorless

Odor Threshold : not determined

pH : not determined

Melting point/freezing point :  $< -80 \, ^{\circ}\text{F} / < -62 \, ^{\circ}\text{C}$ 

Boiling point/boiling range : not determined

Flash point : 309 °F / 154 °C

Method: Cleveland open cup

Evaporation rate : not determined

Self-ignition :  $> 750 \, ^{\circ}\text{F} / > 399 \, ^{\circ}\text{C}$ 

Method: ASTM D2155

Upper explosion limit / Upper

flammability limit

not determined

Lower explosion limit / Lower :

flammability limit

not determined

Vapor pressure : 0.4 hPa (77 °F / 25 °C)

Relative vapor density : not determined

Relative density : 0.970 - 0.980 (77 °F / 25 °C)

Density : 977 kg/m3 (77 °F / 25 °C)

Solubility(ies)

Water solubility : slightly soluble

Partition coefficient: n-

octanol/water

No data available

Autoignition temperature : not determined

Decomposition temperature : not determined

Viscosity

Viscosity, dynamic : not determined

Viscosity, kinematic :  $< 2600 \text{ mm2/s} (-65 ^{\circ}\text{F} / -54 ^{\circ}\text{C})$ 

9.00 - 9.84 mm2/s (100 °F / 38 °C)

3.01 - 3.41 mm2/s (210 °F / 99 °C)



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Explosive properties : Not classified

Oxidizing properties : Not classified

## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

None known.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition

products

Emits acrid smoke and fumes when heated to decomposition.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

## **Components:**

Triisobutyl phosphate:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 5.14 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

## 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Acute dermal toxicity : LD50 Dermal (Rabbit, Male and Female): > 7,940 mg/kg



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## tert-Butylphenyl diphenyl phosphate:

Acute oral toxicity : LDLo (Rat, Male and Female): 15,800 mg/kg

Assessment: Not classified

Acute inhalation toxicity : (Rat): > 0.4 mg/l

Acute dermal toxicity : LDLo (Rabbit, Male and Female): > 7,940 mg/kg

Assessment: Not classified

triphenylphosphate:

Acute oral toxicity : LD50 Oral (Rat, male): > 6,400 mg/kg

Acute dermal toxicity : LD50 Dermal (Guinea pig, male): > 5,000 mg/kg

#### Skin corrosion/irritation

Not classified based on available information.

**Product:** 

Remarks : No data available

## **Components:**

## Triisobutyl phosphate:

Species : Rabbit Exposure time : 4 h

Result : Mild skin irritation

## 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Species : Rabbit Exposure time : 24 h

Assessment : Not classified as hazardous. Result : slight to moderate irritation

# tert-Butylphenyl diphenyl phosphate:

Species: RabbitAssessment: Not classifiedMethod: Draize TestResult: slight irritation

triphenylphosphate:

Species : Guinea pig

Remarks : Non-irritating to the skin.

## Serious eye damage/eye irritation

Not classified based on available information.

**Product:** 

Remarks : No data available



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## Components:

### Triisobutyl phosphate:

Species : Rabbit
Result : slight
Assessment : Not classified

## 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Species : Rabbit

Result : slight irritation

Exposure time : 24 h

Assessment : Not classified

#### tert-Butylphenyl diphenyl phosphate:

Species : Rabbit

Result : slight irritation
Assessment : Not classified

# triphenylphosphate:

Species : Rabbit Result : slight

### Respiratory or skin sensitization

#### Skin sensitization

May cause an allergic skin reaction.

#### Respiratory sensitization

Not classified based on available information.

### **Components:**

### Triisobutyl phosphate:

Test Type : OECD 406: Guinea pig sensitization

Species : Guinea pig

Method : OECD 406: Guinea pig sensitization
Result : May cause sensitization by skin contact.

## 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Test Type : Skin Sensitization

Species : Guinea pig

Result : May cause sensitization by skin contact.

## tert-Butylphenyl diphenyl phosphate:

Test Type : OECD 429: LLNA

Species : Mouse
Assessment : Not classified
Result : sensitizing



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Species : Humans
Assessment : Not classified
Result : Not a skin sensitizer.

Remarks : Patch test on human volunteers did not demonstrate

sensitization properties.

#### Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

Triisobutyl phosphate:

Genotoxicity in vitro : Test Type: Salmonella typhimurium assay (Ames test)

Metabolic activation: +/- activation

Method: Bacterial Reverse Mutation Assay

Result: negative

Genotoxicity in vivo : Result: negative

7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Genotoxicity in vitro : Test Type: Salmonella typhimurium assay (Ames test)

Metabolic activation: +/- activation

Method: Bacterial Reverse Mutation Assay

Result: negative

Test Type: Mutagenicity - Mammalian Metabolic activation: +/- activation

Method: In vitro Mammalian Chromosome Aberration Test

Result: equivocal

Test Type: Mutagenicity - Mammalian Metabolic activation: +/- activation

Method: In vitro Mammalian Cell Gene Mutation Test

Result: negative

Genotoxicity in vivo : Species: Rat (Male and Female)

Application Route: intraperitoneal injection

Method: Mammalian Bone Marrow Chromosome Aberration

Test

Result: equivocal

tert-Butylphenyl diphenyl phosphate:

Genotoxicity in vitro : Test Type: Mutagenicity - Bacterial

Method: Bacterial Reverse Mutation Assay

Result: negative

Test Type: Mutagenicity - Mammalian

Method: In vitro Mammalian Cell Gene Mutation Test

Result: negative

Test Type: Mutagenicity - Mammalian

Method: Genetic Toxicology: In Vitro Sister Chromatid Ex-

change Assay in Mammalian Cells



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Result: negative

#### Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

Not classified based on available information.

**Product:** 

Effects on fertility : Remarks: No data available

## **Components:**

#### triphenylphosphate:

Reproductive toxicity - As-

sessment

Based on available data, the classification criteria are not met.

## STOT-single exposure

Not classified based on available information.

**Product:** 

Routes of exposure : inhalation (dust/mist/fume)

Assessment : Not classified

**Components:** 

Triisobutyl phosphate:

Assessment : Not classified

STOT-repeated exposure

Not classified based on available information.

Product:

Assessment : Not classified

**Components:** 

Triisobutyl phosphate:

Assessment : Not classified

tert-Butylphenyl diphenyl phosphate:

Routes of exposure : Oral



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Assessment : Based on available data, the classification criteria are not met.

### Repeated dose toxicity

### **Components:**

Triisobutyl phosphate:

Species : Rat, male

68.4 mg/kg

Application Route : Oral Study Exposure time : 90 days

# tert-Butylphenyl diphenyl phosphate:

Species : Rat, Male and Female NOAEL : 107.5 - 124.8 mg/kg

Application Route : Oral Study Exposure time : 90 days

Remarks : Based on available data, the classification criteria are not met.

## **Aspiration toxicity**

Not classified based on available information.

## **Product:**

No data available

## **Components:**

### Triisobutyl phosphate:

Not classified

### 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Not applicable

## Information on likely routes of exposure

## **Product:**

Inhalation : Remarks: None known.

Skin contact : Remarks: May cause an allergic skin reaction.

Eye contact : Remarks: Contact with the eyes may be very painful but does

not cause damage.

Ingestion : Remarks: None known.



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#### **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

**Product:** 

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 23 mg/l

Exposure time: 96 h

Remarks: Read-across from a similar material

EC50 (Leuciscus idus (Golden orfe)): 17.8 - 21.5 mg/l

Exposure time: 96 h

Remarks: Read-across from a similar material

Toxicity to daphnia and other :

aquatic invertebrates

(Daphnia magna (Water flea)): 50.5 mg/l

Exposure time: 48 h

Remarks: Read-across from a similar material

EC50 (Daphnia magna (Water flea)): 11 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Scenedesmus subspicatus): 34.1 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC:

Remarks: No data available

Toxicity to daphnia and other :

aquatic invertebrates (Chronic toxicity)

NOEC:

Remarks: No data available

Toxicity to microorganisms

EC50 (Bacteria): 37.2 mg/l

Exposure time: 28 d

#### Components:

Triisobutyl phosphate:

Toxicity to fish : EC50 (Leuciscus idus (Golden orfe)): 17.8 - 21.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 11 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

Exposure time. To th

ErC50 (Scenedesmus subspicatus): 34.1 mg/l Exposure time: 72 h

Toxicity to microorganisms : EC50 (Bacteria): 37.2 mg/l

Exposure time: 28 d

tert-Butylphenyl diphenyl phosphate:

Toxicity to fish : EC50 (Ictalurus catus (catfish)): 0.8 mg/l

Exposure time: 96 h



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Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.2 mg/l

Exposure time: 48 h

M-Factor (Acute aquatic tox- :

icity)

: 1

triphenylphosphate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.4 mg/l

Exposure time: 96 h

M-Factor (Acute aquatic tox-

icity)

1

## Persistence and degradability

**Product:** 

Biodegradability : Remarks: Expected to be biodegradable

Biochemical Oxygen De-

mand (BOD)

Remarks: No data available

Chemical Oxygen Demand

(COD)

Remarks: No data available

#### **Components:**

Triisobutyl phosphate:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 70 - 80 % Exposure time: 28 d

Method: Ready Biodegradability: CO2 Evolution Test

7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 2-ethylhexyl ester:

Biodegradability : Concentration: 100 mg/l

Method: Ready Biodegradability: Modified MITI Test (I)

Remarks: Readily biodegradable

tert-Butylphenyl diphenyl phosphate:

Biodegradability : Result: Readily biodegradable.

triphenylphosphate:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

**Product:** 

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Read-across from a similar material



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### **Components:**

Triisobutyl phosphate:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-

octanol/water

log Pow: 3.72

#### tert-Butylphenyl diphenyl phosphate:

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 1,850

triphenylphosphate:

Partition coefficient: n-

octanol/water

log Pow: 4.63

### Mobility in soil

No data available

#### Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Disposal methods**

Waste from residues : 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.

Dispose of in accordance with local regulations.

#### **SECTION 14. TRANSPORT INFORMATION**

#### International Regulations

**IATA-DGR** 

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(triphenyl phosphate)

Class : 9 Packing group : III

Labels : Class 9 - Miscellaneous dangerous substances and articles

Packing instruction (cargo

aircraft)

964

Packing instruction (passen-

ger aircraft)

964



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Remarks : Shipping in package sizes of less than 5 L (liquids) or 5 KG

(solids) may lead to a non-regulated classification.

**IMDG-Code** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(triphenyl phosphate)

Class : 9
Packing group : III
Labels : 9

EmS Code : F-A, S-F Marine pollutant : yes

Remarks : Shipping in package sizes of less than 5 L (liquids) or 5 KG

(solids) may lead to a non-regulated classification.

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## **Domestic regulation**

**49 CFR** 

UN/ID/NA number : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(triphenyl phosphate)

Class : 9 Packing group : III

Labels : Class 9 - Miscellaneous dangerous substances and articles

ERG Code : 171

Marine pollutant : yes(triphenyl phosphate)

Remarks : Above applies only to containers over 119 gallons or 450

liters. Not regulated if shipped in packages less than or equal

to 119 gallons (450 liters).

Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal

to 119 gallons (450 liters).

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### **SECTION 15. REGULATORY INFORMATION**

## **EPCRA - Emergency Planning and Community Right-to-Know**

#### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

## SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.



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### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

## The ingredients of this product are reported in the following inventories:

TCSI : Not listed

TSCA : All substances listed as active on the TSCA inventory

DSL : All components of this product are on the Canadian DSL

ISHL : Not listed

AICS : On the inventory, or in compliance with the inventory

KECI : Not listed

PICCS : Not listed

ENCS : On the inventory, or in compliance with the inventory

NZIoC : Not listed

IECSC : On the inventory, or in compliance with the inventory

#### **TSCA list**

The following substance(s) is/are subject to a Significant New Use Rule: Potassium decafluo- 67584-42-3

ro(pentafluoroethyl)cyclohexanesulphonate

No substances are subject to TSCA 12(b) export notification requirements.



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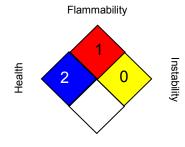
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 SDSUS / Z8 / 0260
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#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### **NFPA 704:**



Special hazard

#### HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA PO : USA. OSHA - TABLE Z-1 Limits for Air Contaminants -

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OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials: bw - Body weight: CERCLA - Comprehensive Environmental Response. Compensation. and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC -International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse)



# Skydrol® 5 Hydraulic Fluid

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Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to

compile the Material Safety

Data Sheet

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The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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