



Reolube® HYD 46B

Version:	1.0
Revision Date:	07/13/2009
Print Date:	07/14/2009

The recipient of this Safety Data Sheet is urged to study it carefully to become aware of hazards, if any, of the product involved. In the interest of safety you should (1) notify your employees, agents and contractors of the information on this sheet, (2) furnish a copy to each of your customers for the product, and (3) request your customers to inform their employees and customers as well.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **Reolube® HYD 46B**
Synonyms: Triaryl phosphates, tert-Butylated, tert-Butylated triphenyl phosphate, Durad 220 BF
Molecular formula: Mixture
Product Use Description: Hydraulic fluid
Chemical nature: Aryl phosphate

Company: Chemtura Corporation
199 Benson Road
Middlebury, CT
06749

General Information Telephone Number: (765) 497-6100

Emergency telephone: (800) 949-5167
CHEMTREC (US Transportation) :
(800) 424-9300
(703) 527-3887
CANUTEC (Canadian Transportation):
(613) 996-6666

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by: Product Safety Department
(US) +1 866-430-2775
(EU) +44 (0) 1753.603.000
Email: MSDSRequest@chemtura.com

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form:	liquid
Colour:	clear
Odour:	odourless

Based on analogy with similar materials, harmful effects are not expected.

WHMIS Classification : Not controlled



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Very toxic to aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

Potential Health Effects

Primary Routes of Entry	:	Inhalation Ingestion Skin contact
Aggravated Medical Condition	:	None reported.
Inhalation	:	Not expected to be a hazard in normal industrial use.
Skin	:	Not expected to be a hazard in normal industrial use.
Eyes	:	Not expected to be a hazard in normal industrial use.
Ingestion	:	Not expected to be a hazard in normal industrial use.
Chronic Exposure	:	Epidemiology studies completed in 1977 and 1985 of current and former workers at a production facility where natural and synthetic triaryl phosphate esters are manufactured have not demonstrated any unusual pattern of mortality or disease.

SECTION 3.COMPOSITION/INFORMATION ON INGREDIENTS

Non-Hazardous components

Component	CAS-No.	Concentration
Phenol, isobutyleneated, phosphate (3:1)	68937-40-6	87 - 93 %
triphenyl phosphate	115-86-6	7 - 13 %

SECTION 4. FIRST AID MEASURES

First aid procedures

Inhalation	:	Remove to fresh air. Get medical attention.
Skin contact	:	Wash skin thoroughly with soap and water for at least 15 minutes. If skin irritation occurs, get medical advice/attention.
Eye contact	:	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.



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Ingestion : If conscious, make the victim drink the following:
Drink 1 or 2 glasses of water.
Get medical attention immediately.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : > 428 °F (220 °C)

Protective equipment and precautions for firefighters

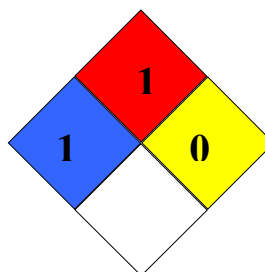
Suitable extinguishing media : Foam
Dry chemical

Further information : In the event of fire, wear self-contained breathing apparatus.
Wear personal protective equipment.

Specific hazards during fire fighting : Burning produces obnoxious and toxic fumes.
Thermal decomposition can lead to release of irritating gases and vapours.

Further information

NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0



SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : For personal protection see section 8.

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid release to the environment.

Methods for containment /
Methods for cleaning up : Soak up with oil absorbent material.
Pick up and transfer to properly labelled containers.



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SECTION 7. HANDLING AND STORAGE

Handling

Advice on safe handling : Use personal protective equipment as required.
Use with adequate ventilation.
Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapors.
Avoid contact with skin, eyes and clothing.
Do not breathe vapours or spray mist.
Avoid repeated exposure.
Avoid prolonged contact.

Storage

Requirements for storage areas and containers : Keep in a dry, cool and well-ventilated place.
Isolate from incompatible materials.
Keep container tightly closed.
Protect containers against damage.

Other data : Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Engineering measures : Local ventilation is needed in the presence of airborne mists.
Use local ventilation to keep levels below established threshold values.
Adequate general ventilation is recommended when handling to control airborne levels.
Use mechanical ventilation for general area control.

Personal protective equipment

Eye protection : Safety goggles

Hand protection :

Skin and body protection : For personal hygiene purposes, use adequate clothing to prevent skin contact.

Respiratory protection : Wear a NIOSH/MSHA approved organic cartridge respirator if misting or vapor occurs, or there is potential for airborne exposures to exceed established threshold values.
A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Wear a NIOSH/MSHA approved self-contained breathing apparatus in emergency situations.

Hygiene measures : Wash thoroughly after handling.
Wash contaminated clothing before reuse.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : liquid
Colour : clear
Odour : odourless

Safety data

Flash point : > 428 °F (220 °C)
Ignition temperature : 1,040 °F (560 °C)
Remarks: Auto-flammability
Freezing point : < -22 °F (-30 °C)
Boiling point/boiling range : > 572 °F (300 °C)
at 1,013.250164 hPa (1,013.250164 hPa)
Percent volatile : 0.3 %
At 100C
Vapour pressure : 0.044 hPa (0.044 hPa)
at 302 °F (150 °C)
Relative density : 1.17
at 68 °F(20 °C)
Water solubility : insoluble
Viscosity, dynamic : 120 mPa.s
at 77 °F (25 °C)

SECTION 10. STABILITY AND REACTIVITY

Materials to avoid : None known.
Thermal decomposition : >300 °C (572 °F)
Hazardous reactions : polymerization
Will not occur.
Note : Stable under normal conditions.



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SECTION 11. TOXICOLOGICAL INFORMATION

<u>Further information</u> (Product)	:	The toxicological properties of this material have not been fully characterized.
NTP (Product)	:	<u>US. National Toxicology Program (NTP) Report on Carcinogens</u> No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC (Product)	:	<u>US. IARC Monographs on Occupational Exposures to Chemical Agents</u> No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHAS (Product)	:	<u>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</u> No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
ACGIH (Product)	:	<u>US. ACGIH Threshold Limit Values</u> No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 12. ECOLOGICAL INFORMATION

Acute Fish toxicity	:	LC50
	Species:	Oncorhynchus mykiss (rainbow trout)
	Concentration:	3.40 mg/l
	Exposure time:	96 h
		LC50
	Species:	Pimephales promelas (fathead minnow)
	Concentration:	42.30 mg/l
	Exposure time:	96 h
Toxicity to daphnia and other aquatic invertebrates.	:	EC50
	Species:	Daphnia magna (Water flea)
	Concentration:	3.90 mg/l
	Exposure time:	48 h
Additional ecological information	:	Information given is based on data on the components and the ecotoxicology of similar products. Avoid release to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Further information	:	Dispose of waste material in compliance with all federal, state, and local regulations. Dispose of wastes in an approved waste disposal facility. If this product was supplied in a single use container, care should be taken to dispose of the container in a responsible manner and in accordance with applicable regulations.
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Label precautions should be followed for any residual material in the container.

SECTION 14. TRANSPORT INFORMATION

<u>TDG</u>	UN-Number	: 3082
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
	Proper technical name	(triphenyl phosphate, tert-butylated triphenyl phosphates mixtures containing 10% to 48% triphenyl phosphates)
	Class	: 9
	Packing group	: III
<u>IATA</u>	UN-Number	: 3082
	Proper shipping name	: Environmentally hazardous substance, liquid n.o.s.
	Proper technical name	(triphenyl phosphate, tert-butylated triphenyl phosphates mixtures containing 10% to 48% triphenyl phosphates)
	Class	: 9
	Packing group	: III
<u>IMDG</u>	UN-Number	: 3082
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
	Proper technical name	(triphenyl phosphate, tert-butylated triphenyl phosphates mixtures containing 10% to 48% triphenyl phosphates)
	Class	: 9
	Packing group	: III



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SECTION 15. REGULATORY INFORMATION

WHMIS Classification : Not controlled

The components of this product are reported in the following inventories:

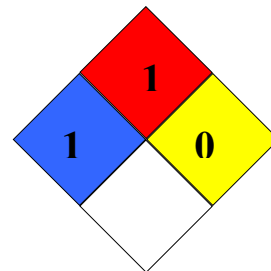
TSCA Listed
DSL Listed

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

Further information

NFPA Classification : Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0



HMIS Classification : Health Hazard: 1
Flammability: 1
Reactivity: 0
PPI: Ask supervisor or safety specialist for handling instructions

Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+52 113 711 91 44
	All other countries	+44 (0)208 762 8322



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Mexico:	+52 555 004 87 63
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The information provided in this 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. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of the seller, it is the user's obligation to determine the conditions of safe use of the products.