



SAFETY DATA SHEET

Reofos® 50

Version: 1.3

Revision Date: 09/07/2016

Print Date: 12/19/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Reofos® 50

Product Use Description: Fire retardant

Company: Chemtura Corporation
199 Benson Road
Middlebury, CT
06749
United States of America (USA)

Telephone: (US) +1 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300
:
Chemtura Corporation Emergency Response: CHEMTURA : 800-292-5898

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

Prepared by Product Safety Department
(US) +1 866-430-2775

MSDSRequest@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Fire retardant

Restrictions on use : Restricted to professional users.

SECTION 2. HAZARDS IDENTIFICATION

Form	liquid
Colour	colourless
Odour	odourless

GHS Classification

Reproductive toxicity (Oral) : Category 2
Specific target organ toxicity - : Category 2
repeated exposure (Oral)
Chronic aquatic toxicity : Category 1

GHS label elements

Signal word : **Warning**



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Hazard pictograms



Hazard statements

- : H361 Suspected of damaging fertility or the unborn child if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

Other hazards

: None

Precautionary statements

- : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Self-ignitable

: No data available

Carcinogenicity:

IARC

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.

OSHA

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.

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.

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.

NTP

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.



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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.

Environmental Effects

Environmental Effects : Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	68937-41-7	>= 90 - <= 100 %

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Obtain medical attention.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Wash off with soap and water.
If symptoms persist, call a physician.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

Most important symptoms and effects, both acute and delayed : toxic effects for reproduction

Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during firefighting : Burning produces irritant fumes.
Exposure to decomposition products may be a hazard to



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health.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Use personal protective equipment.

Environmental precautions : Discharge into the environment must be avoided.
Do not contaminate water.
Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up : Ventilate the area. 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

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.
Wear personal protective equipment.
Avoid contact with skin, eyes and clothing.
Do not breathe vapours or spray mist.

Conditions for safe storage : Keep in a dry, cool and well-ventilated place.
Keep container tightly closed.
Protect from contamination.

Materials to avoid : None.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Personal protective equipment

Respiratory protection : When using this product at elevated temperatures, wear a respirator with a vapour filter (see section 8).
Respirator with a vapour filter (EN 141)

Hand protection



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Remarks : Solvent-resistant gloves (butyl-rubber)

Eye protection : Safety glasses with side-shields
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : To protect against splashes from pouring:
Chemical resistant apron
Impervious clothing
Rubber or plastic boots

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : colourless

Odor : odourless

Odour Threshold : No data available

pH : Not applicable

Melting point/range :
Not applicable

Boiling point/boiling range : 220 - 270 °C (5.333 hPa)

Evaporation rate : No data available

Flash point : 199 °C
Method: closed cup

Auto-flammability : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : 0.035 hPa (150 °C)

Relative vapour density : No data available

Relative density : 1.170 - 1.180 (20 °C)

Density : No data available

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : Pow: 4.9 - 5.2
No data available



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Auto-ignition temperature : 551 °CAuto-flammability
Thermal decomposition : No data available
Viscosity
Viscosity, dynamic : No data available
Viscosity, kinematic : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : None reasonably foreseeable.
Possibility of hazardous reactions : Hazardous polymerisation does not occur.
Conditions to avoid : Not applicable
Incompatible materials : None.
Hazardous decomposition products :
Carbon oxides
Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity
Phenol, isopropylated, : LD50: > 5,000 mg/kg
phosphate (3:1) [Triphenyl : Species: Rat
phosphate > 5%]
(Component)
Acute inhalation toxicity
Phenol, isopropylated, : LC50: > 200 mg/l
phosphate (3:1) [Triphenyl : Species: Rat
phosphate > 5%]
(Component)
Acute dermal toxicity
Phenol, isopropylated, : LD50: > 10,000 mg/kg
phosphate (3:1) [Triphenyl : Species: Rabbit
phosphate > 5%]
(Component)
Skin irritation (Product) : Species: Rabbit
Result: No skin irritation



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Eye irritation (Product) : Species: Rabbit
Result: No eye irritation

Repeated dose toxicity
Phenol, isopropylated,
phosphate (3:1) [Triphenyl
phosphate > 5%]
(Component) : Species: Rat
Application Route: Oral
Target Organs: Adrenal gland
Exposure time: 13 weeks ()
Method: OECD Test Guideline 408

Aspiration toxicity (Product) : No aspiration toxicity classification

CMR effects
Phenol, isopropylated,
phosphate (3:1) [Triphenyl
phosphate > 5%]
(Component) : Reproductive toxicity: Some evidence of adverse effects on sexual
function and fertility, based on animal experiments.

Further information (Product) : Acute Health Hazard
Chronic Health Hazard
Information given is based on data obtained from similar substances.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish (Product) : Remarks:
Information refers to the main component.

Toxicity to daphnia and other
aquatic invertebrates
(Product) : Remarks:
Information refers to the main component.

Toxicity to fish (Chronic toxicity)
Phenol, isopropylated,
phosphate (3:1) [Triphenyl
phosphate > 5%]
(Component) : NOEC: 3.1 µg/l
Exposure time: 33 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
Phenol, isopropylated,
phosphate (3:1) [Triphenyl
phosphate > 5%]
(Component) : NOEC: 0.041 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211



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Elimination information (persistence and degradability)

Bioaccumulation (Product) : Remarks:
No data available

Mobility (Product) : Remarks:
No data available

Biodegradability (Product) : Result: Not readily biodegradable.

Ecotoxicology Assessment

Results of PBT assessment (Product)

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological : Information given is based on data on the components and the
information (Product) ecotoxicology of similar products.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.
Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with
chemical or used container.
Offer surplus and non-recyclable solutions to a licensed
disposal company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate
> 5%])

Class : 9

Packing group : III

Labels : Miscellaneous

IMDG-Code

UN number : UN 3082



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Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%])
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.
(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%])
Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171
Marine pollutant : yes(Phenol, isopropylated phosphate (3:1) [Triphenyl phosphate > 5%])

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

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

SARA304 Reportable Quantity

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

SARA 311/312 Hazards : Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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.

US State Regulations



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California Prop 65

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

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

US.TSCA

On TSCA Inventory

DSL

All components of this product are on the Canadian DSL

AICS

On the inventory, or in compliance with the inventory

NZIoC

On the inventory, or in compliance with the inventory

ENCS

On the inventory, or in compliance with the inventory

KECI

On the inventory, or in compliance with the inventory

PICCS

On the inventory, or in compliance with the inventory

IECSC

On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Further information

Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+52 555 004 8763

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.