

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Reofos® 65

Product Use Description: Flame retardants
AdditiveCompany: LANXESS Solutions US Inc.
199 Benson Road
Middlebury, CT
06749
United States of America (USA)

Telephone: (US) +1 866-430-2775Emergency telephone
number: CHEMTREC: (24 hours) 800-424-9300
:
: US : 800-292-5898 (Technical inquiries)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 : Flame retardants, Additive

Restrictions on use : Restricted to professional users.

SECTION 2. HAZARDS IDENTIFICATION

Form	liquid
Colour	colourless
Odour	odourless

GHS ClassificationReproductive toxicity (Oral) : Category 2
Specific target organ toxicity - : Category 2
repeated exposure
Chronic aquatic toxicity : Category 1
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Reofos® 65


Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

GHS label elements

Signal word : **Warning**

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.
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.

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 on OSHA's list of regulated carcinogens.

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.

Environmental Effects

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

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 : Any

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

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

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

Components	CAS-No.	Form of exposure	Permissible concentration	Basis

Engineering measures : Use only with adequate ventilation. Ensure that extracted air cannot be returned to the workplace

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

through the ventilation system.
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

- Respiratory protection : When using this product at elevated temperatures, wear a respirator with a vapour filter (see section 8).
- Hand protection
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
- Pour point : -36 °C
Method: ISO 3016
- Boiling point/boiling range : 220 - 265 °C (5.333 hPa)
- Evaporation rate : No data available
- Flash point : >= 180 °C
Method: ASTM D 93
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : 0.45 kPa (20 °C)

0.58 kPa (25 °C)

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

Relative vapour density : No data available
Relative density : 1.153 - 1.183 (20 °C)

Solubility(ies)

Water solubility : insoluble
Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : No data available

Auto-ignition temperature : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : 27 - 32 mPa.s Method: ASTM D 445

Viscosity, kinematic : No data available
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 toxicity****Components:**

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]:

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

Acute inhalation toxicity : LC50 (Rat): > 200 mg/l
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 10,000 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: No eye irritation
GLP: no

Germ cell mutagenicity

Components:

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

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 on OSHA's list of regulated carcinogens.

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.

Reproductive toxicity

Components:

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]:

Effects on foetal development : Species: Rat
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level:
200 mg/kg bw/day
Developmental Toxicity: NOEL: 400 mg/kg bw/day
Method: OECD Test Guideline 414

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

Result: No teratogenic effects

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

Components:

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]:
Assessment: Not classified due to data which are conclusive although insufficient for classification.

STOT - repeated exposure

Product:

Assessment: May cause damage to organs through prolonged or repeated exposure.

Components:

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]:
Exposure routes: Oral
Target Organs: Adrenal gland, Liver, Reproductive organs
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]:
Species: Rat
No observed adverse effect level: < 25 mg/kg
Application Route: Oral
Exposure time: 13 weeks
Method: OECD Test Guideline 408
Target Organs: Adrenal gland

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: Information given is based on data on the components and the toxicology of similar products.

SECTION 12. ECOLOGICAL INFORMATION

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

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

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

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of wastes in an approved waste disposal facility.



SAFETY DATA SHEET

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

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
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



SAFETY DATA SHEET

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
phenol	108-95-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
phenol	108-95-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

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

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.

Please note that Section 3 of this document lists only the hazardous components required by the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.

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

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
TCSI	On the inventory, or in compliance with the inventory
US.TSCA	On TSCA Inventory



SAFETY DATA SHEET

Reofos® 65

Version: 2.3

Revision Date: 02/15/2018

Print Date: 06/22/2018

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.