

ROYCO LANDING GEAR FLUID RED

Version 1.2

Revision Date 27.07.2017

Print Date 11.10.2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : ROYCO LANDING GEAR FLUID RED

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Raw material for industry
Lubricant

Recommended restrictions on use : For industrial use only.

1.3 Details of the supplier of the safety data sheet

Company: Supplier
LANXESS Solutions UK Ltd.
Tenax Road, Trafford Park
Manchester
United Kingdom
M17 1WT

Customer Service: +44 161 875 3800
Prepared by Product Safety Department

Further information for the safety data sheet :
msdsrequest@chemtura.com

1.4 Emergency telephone number

Emergency telephone number: +44 (0) 1235 239 670 (NCEC)

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 H319: Causes serious eye irritation.

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Aspiration hazard, Category 1

H304: May be fatal if swallowed and enters airways.

Chronic aquatic toxicity, Category 3

H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

H304

May be fatal if swallowed and enters airways.

H319

Causes serious eye irritation.

H412

Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P273

Avoid release to the environment.

P280

Wear eye protection/ face protection.

Response:

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331

Do NOT induce vomiting.

P337 + P313

If eye irritation persists: Get medical advice/ attention.

Disposal:

P501

Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Distillates (petroleum), hydrotreated middle

Distillates (petroleum), hydrotreated light

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No.	Classification	Concentration
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	EC-No. Registration number	(REGULATION (EC) No 1272/2008)	(%)
Distillates (petroleum), hydrotreated middle	64742-46-7 265-148-2	Asp. Tox.1; H304	>= 10 - < 20
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3 272-028-3	Skin Irrit.2; H315 Eye Dam.1; H318 Aquatic Chronic2; H411	>= 1 - < 2.5
Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]	Not Assigned 700-990-0 01-2119519251-50-0002	Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0.25 - < 1
2,6-di-tert-butyl-p-cresol	128-37-0 204-881-4 01-2119555270-46-xxxx	Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0.25 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : If inhaled
Move to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
In case of bluish discolouration (lips, ear lobes, fingernails), give oxygen as quickly as possible.
Call a physician or poison control centre immediately.
- In case of skin contact : In case of skin contact
Wash off with soap and water.
Remove contaminated clothing and shoes.
Wash contaminated clothing before re-use.
Get medical attention if irritation develops and persists.
- In case of eye contact : In case of eye contact
Rinse thoroughly with plenty of water, also under the eyelids.
If eye irritation persists, consult a specialist.
- If swallowed : If swallowed, DO NOT induce vomiting.
Call a physician or poison control centre immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.

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4.3 Indication of any immediate medical attention and special treatment needed

Treatment : For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO₂)
Dry powder
Foam
Alcohol-resistant foam
Water mist

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Burning produces noxious and toxic fumes.

5.3 Advice for firefighters

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

Further information : In the event of fire, cool tanks with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Forms slippery/greasy layers with water.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.
Do not contaminate water.
Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for 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).

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6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Keep container closed when not in use.
Do not use pressure to empty drums.
Ensure all equipment is electrically grounded before beginning transfer operations.

Hygiene measures : Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.

Other data : Stable under recommended storage conditions.

7.3 Specific end use(s)

Specific use(s) : Raw material for industry

Raw material for industry

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Component	End Use	Exposure routes	Potential health effects	Value:
Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]	Workers	Skin contact	Long-term systemic effects	10.75 mg/kg
	Workers	Inhalation	Long-term systemic effects	7.58 mg/m3
	General exposures	Skin contact	Long-term systemic effects	5.375 mg/kg
	General exposures	Inhalation	Long-term systemic effects	1.87 mg/m3

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	General exposures	Ingestion	Long-term systemic effects	5.375 mg/kg
2,6-di-tert-butyl-p-cresol	Workers	Skin contact		0.5 mg/kg
	Workers	Inhalation		3.5 mg/m ³

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Component	Environmental Compartment	Value
Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]	Fresh water	Value: 0.000798 mg/l
	Marine water	Value: 0.00008 mg/l
	Fresh water sediment	Value: 0.96 mg/kg
	Marine sediment	Value: 0.09 mg/kg
	Soil	Value: 0.252 mg/kg
2,6-di-tert-butyl-p-cresol	Fresh water	Value: 0.000199 mg/l
	Marine water	Value: 0.000019 mg/l
	Fresh water sediment	Value: 0.0996 mg/kg
	Marine sediment	Value: 0.00996 mg/kg
	Soil	Value: 0.04769 mg/kg

8.2 Exposure controls

Engineering measures

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

Personal protective equipment

Eye protection : Safety glasses with side-shields
Tightly fitting safety goggles

Hand protection : Neoprene gloves

Skin and body protection : Impervious clothing

Respiratory protection : Breathing apparatus needed only when aerosol or mist is formed.
In the case of vapour formation use a respirator with an approved filter.

Environmental exposure controls

General advice : Should not be released into the environment., Do not

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contaminate water., Do not flush into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: red
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/range	: Not applicable
Boiling point/boiling range	: No data available
Flash point	: > 200 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Solubility(ies)	
Water solubility	: slightly soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, kinematic	: ca. 14.5 mm ² /s (40 °C)

9.2 Other information

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Self-Accelerating decomposition temperature (SADT) : Method: No information available.

Oxidizing potential : No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Conditions to avoid : Contamination
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Remarks: Not classified due to lack of data.

Acute inhalation toxicity : Remarks: Not classified due to lack of data.

Acute dermal toxicity : Remarks: Not classified due to lack of data.

Components:

2,6-di-tert-butyl-p-cresol:

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Acute oral toxicity : LD50 (Rat, male and female): > 2,930 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Product:

Remarks: Not classified due to lack of data.

Components:

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts:

Result: Irritating to skin.

2,6-di-tert-butyl-p-cresol:

Species: Rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Product:

Remarks: Not classified due to lack of data.

Components:

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

GLP: yes

2,6-di-tert-butyl-p-cresol:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: Not classified due to lack of data.

Components:

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

2,6-di-tert-butyl-p-cresol:

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Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:

Germ cell mutagenicity

Assessment : Not classified due to lack of data.

Components:

2,6-di-tert-butyl-p-cresol:

Genotoxicity in vitro

- : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
- : Test Type: Chromosome aberration test in vitro
Result: Conflicting results have been seen in different studies.
- : Test Type: Unscheduled DNA synthesis (UDS)
Result: negative
- : Test Type: In Vitro mammalian Cell Gene Mutation Test
Result: negative

Genotoxicity in vivo

- : Test Type: In vivo micronucleus test
Test species: Mouse (male and female)
Cell type: Bone marrow
Method: Mutagenicity (micronucleus test)
Result: negative
- : Test Type: in vivo assay
Test species: Rat (male)
Cell type: Bone marrow
Application Route: Oral
Method: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Result: negative

Germ cell mutagenicity

Assessment

- : Animal testing did not show any mutagenic effects.

Carcinogenicity

Product:

Carcinogenicity

Assessment : Not classified due to lack of data.

Reproductive toxicity

Product:

Reproductive toxicity

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Assessment : Not classified due to lack of data.

Components:

2,6-di-tert-butyl-p-cresol:

Reproductive toxicity

Assessment

: No toxicity to reproduction
No effects on or via lactation

STOT - single exposure

Product:

Assessment: Not classified due to lack of data.

STOT - repeated exposure

Product:

Assessment: Not classified due to lack of data.

Components:

2,6-di-tert-butyl-p-cresol:

Exposure routes: Oral

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Further information

Product:

Remarks: There is no data available for this product.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Components:

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 10 - 35 mg/l
Exposure time: 96 h

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Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 - 1.5 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : EbC50 (Selenastrum capricornutum (green algae)): 1 - 5 mg/l
End point: Biomass
Exposure time: 96 h
Method: OECD Test Guideline 201
GLP: yes

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Toxicity to fish : LC50 (Fish): 0.8 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.202 mg/l
Exposure time: 48 h

Toxicity to fish (Chronic toxicity) : NOEC: 0.093 mg/l
Exposure time: 90 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.0399 mg/l
Exposure time: 21 d

2,6-di-tert-butyl-p-cresol:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.07 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Analytical monitoring: yes
GLP: yes

12.2 Persistence and degradability

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Biodegradability : GLP: yes
Remarks: Readily biodegradable.

2,6-di-tert-butyl-p-cresol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 50 mg/l
Result: According to the results of tests of biodegradability this product is not readily biodegradable.

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Biodegradation: 4.5 %

Exposure time: 28 d

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Reaction mass of p-t-butylphenyldiphenyl phosphate and bis(p-t-butylphenyl)phenyl phosphate and triphenyl phosphate [TPP>25%]:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1,850

2,6-di-tert-butyl-p-cresol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Temperature: 25 °C
Concentration: 0.05 mg/l
Bioconcentration factor (BCF): 230 - 2,500

Partition coefficient: n-octanol/water : log Pow: 5.1
GLP: yes

log Pow: 4.2

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Additional ecological information : Remarks: There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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- Product : Dispose of in accordance with the European Directives on waste and hazardous waste.
Dispose of wastes in an approved waste disposal facility.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
- Contaminated packaging : Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals

Neither banned nor restricted

Candidate List of Substances of Very High Concern for Authorisation

Neither banned nor restricted

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors

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Neither banned nor restricted

Restrictions on the marketing and use of certain dangerous substances and preparations

Distillates (petroleum), hydrotreated middle	64742-46-7	19.4984 %
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	58.0785 %

Major Accident Hazard Legislation

Seveso Directive

Directive 96/82/EC does not apply

Water contaminating class (Germany) : WGK 1 slightly water endangering
Remarks: self classification

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	: Not 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	: Not in compliance with the inventory
US.TSCA	: On TSCA Inventory

15.2 Chemical safety assessment

No information available.

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SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

- H319 Causes serious eye irritation.
- H304 May be fatal if swallowed and enters airways.
- H412 Harmful to aquatic life with long lasting effects.

Emergency Phone Number

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074 (NCEC)
	Australia	+61 2 8014 4558
	New Zealand	+64 9929 1483 (NCEC)
	China	+86 512 8090 3042 (NCEC)
	Taiwan	+886 2 8793 3212 (NCEC)
	Japan	+81 3 4578 9341 (NCEC)
	Indonesia	007 803 011 0293 (NCEC)
	Malaysia	+60 3 6207 4347 (NCEC)
	Thailand	001 800 120 666 751 (NCEC)
	Korea	+65 3158 1285 (NCEC)
	Vietnam	+84 8 4458 2388 (NCEC)
	India	+65 3158 1198 (NCEC)
	Pakistan	+65 3158 1329 (NCEC)
	Philippines	+65 3158 1203 (NCEC)
	Sri Lanka	+65 3158 1195 (NCEC)
	Bangladesh	+65 3158 1200 (NCEC)
<u>Middle East / Africa:</u>		+44 (0) 1235 239 671 (NCEC)
<u>North America</u>	United States of America (USA)	(800) 424-9300 (CHEMTREC)
	Canada	(800) 424-9300 (CHEMTREC)
<u>Latin America</u>	Mexico	+52 555 004 8763 (NCEC)
	Brazil	+55 11 3197 5891 (NCEC)
	Chile	+56 2 2582 9336 (NCEC)
	All other countries	+44 (0) 1235 239 670 (NCEC)

Further information

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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.