

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 03-Aug-2021 Revision Number 1

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

1.1. Product identifier

Product Code(s) TRC-P359435-1G

Product Name Phosphoric Acid Tris(4-methylphenyl) Ester

NOTE [8] - No registration number is given for this substance because it is under the threshold in REACH Article

6(1) and not subject to the registration requirements according to REACH Title II

EC No 201-105-6

CAS No 78-32-0

Chemical name Tri-p-cresyl phosphate

Pure substance/mixture Substance

Formula C21H21O4P

Molecular weight 368.37

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

Recommended use Laboratory use

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier

LGC Limited Queens Road Teddington Middlesex TW11 0LY UNITED KINGDOM :+44 (0) 20 8943 7000 Fax :+44 (0) 20 8943 2767

Fax :+44 (0) 20 8943 2767 eMail : gb@lgcstandards.com

Web: www.lgcstandards.com

For further information, please contact

E-mail address sds-request@lgcgroup.com

1.4. Emergency telephone number

Emergency Telephone For Hazardous Materials or Dangerous Goods Incident

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Spill, Leak, Fire Exposure, or Accident Call CHEMTREC: USA & Canada 1-800-424-9300 Rest of the world +1 703-741-5970

Emergency Telephone - §45 -	EC)1272/2008
Europe	112
Austria	
Bulgaria	
Croatia	
Cyprus	
Czech Republic	
Denmark	
France	
Hungary	
Ireland	
Italy	
Lithuania	
Luxembourg	
Netherlands	
Norway	
Portugal	
Romania	
Slovakia	
Slovenia	
Spain	
Sweden	
Switzerland	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

110galation (20) 110 1272/2000	
Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements

201-105-6

Contains Tri-p-cresyl phosphate

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Signal word Warning

Hazard statements

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective gloves and protective clothing

P312 - Call a POISON CENTER or doctor if you feel unwell

P391 - Collect spillage

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Tri-p-cresyl phosphate 78-32-0	100	-	201-105-6	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)			

Full text of H- and EUH-phrases: see section 16

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Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
			hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Tri-p-cresyl phosphate 78-32-0	12.8	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a doctor.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a

doctor.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person. Call a doctor.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Wear personal protective clothing

(see section 8).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the

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surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the

chemical

No information available.

5.3. Advice for firefighters

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required.

Other information Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning upTake up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Ensure adequate ventilation.

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General hygiene considerations

Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

7.3. Specific end use(s)

Identified uses

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Tri-p-cresyl phosphate	-	-	-	-	TWA: 0.1 mg/m ³
78-32-0					STEL: 0.3 mg/m ³
Chemical name	France	Germany	Germany MAK	Greece	Hungary
Tri-p-cresyl phosphate	-	=	TWA: 5 mg/m ³	=	-
78-32-0			Peak: 10 mg/m ³		
Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
Tri-p-cresyl phosphate	TWA: 0.05 mg/m ³	=	-	=	-
78-32-0	STEL: 0.15 mg/m ³				

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL)
Predicted No Effect Concentration
(PNEC)

No information available. No information available.

8.2. Exposure controls

Personal protective equipment

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Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protectionWear suitable gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Gloves **Duration of contact** Glove thickness Break through time PPE - Glove material 0.35 mm 8 hours Wear protective nitrile rubber gloves Wear protective butyl 0.5 mm 8 hours rubber gloves Wear protective Viton™ 0.4 mm 8 hours aloves Polyvinyl chloride (PVC) 0.5 mm 8 hours

Skin and body protection Long sleeved clothing. Wear suitable protective clothing.

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this

product. Wash hands before breaks and after work. Wear suitable gloves and eye/face

protection.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid

Appearance Crystalline powder

Colour off-white

Odour No data available.
Odour threshold No information available

Property Values Remarks • Method

Melting point / freezing point77 °CNone knownBoiling point / boiling range410 °CNone knownFlammability (solid, gas)No data availableNone knownFlammability Limit in AirNone known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point210 °CNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNone known

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pH No data available None known

pH (as aqueous solution) No data available No information available

Kinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone knownWater solubility3.4 mg/lNone known

Solubility(ies) Chloroform, Ethyl acetate, Acetic acid,

Alcohol

Partition coefficient5.11None knownVapour pressureNo data availableNone knownRelative density1.16 g/cm³None known

Bulk density
No data available
Liquid Density
No data available

Relative vapour density

No data available

None known

Particle characteristics

Particle Size No information available Particle Size Distribution No information available

9.2. Other information

Molecular weight 368.37 Molecular formula C21H21O4P

9.2.1. Information with regards to physical hazard classes

Not applicable

9.2.2. Other safety characteristics No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None. Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid

Conditions to avoidNone known based on information supplied.

10.5. Incompatible materials

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Incompatible materials Oxidising agent.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon dioxide (CO2). Carbon monoxide. Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact May be absorbed through the skin in harmful amounts. Harmful in contact with skin. (based

on components).

Ingestion Specific test data for the substance or mixture is not available. Harmful if swallowed. (based

on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

No information available

Acute toxicity

Unknown acute toxicity

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation No information available.

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Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposureNo information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Tri-p-cresyl phosphate - LC50: 0.1 - 0.22mg/L - (96h, Lepomis macrochirus) LC50: 0.21 - 0.32mg/L (96h, Oncorhynchus	Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
mykiss) LC50: 20.4 - 41.2mg/L (96h, Lepomis macrochirus) LC50: 3.2 - 10mg/L (96h, Oryzias latipes) LC50: 3.3 - 6.2mg/L (96h, Oncorhynchus mykiss)	Tri-p-cresyl phosphate	-	(96h, Lepomis macrochirus) LC50: 0.21 - 0.32mg/L (96h, Oncorhynchus mykiss) LC50: 20.4 - 41.2mg/L (96h, Lepomis macrochirus) LC50: 3.2 - 10mg/L (96h, Oryzias latipes) LC50: 3.3 - 6.2mg/L (96h,		-

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LC50: 4.8 - 6.4mg/L (96h	
Poecilia reticulata)	

12.2. Persistence and degradability

Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Tri-p-cresyl phosphate	5.11

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessmentNo information available.

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN30

14.2 UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate)

14.3 Transport hazard class(es)

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14.4 Packing group

Description UN3077, Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate), 9,

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14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions A97, A158, A179, A197, A215

ERG Code

IMDG 14.1 UN number or ID number UN3077

14.2 UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate)

14.3 Transport hazard class(es) 9
14.4 Packing group

Description UN3077, Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate), 9,

III, Marine pollutant

14.5 Marine pollutant

Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 274, 335, 966, 967, 969

EmS-No F-A, S-F No information available

Р

14.7 Maritime transport in bulk according to IMO instruments

No information available

<u>RID</u>

14.1 UN number or ID number UN3077

14.2 UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate)

14.3 Transport hazard class(es) 9
14.4 Packing group

Description UN3077, Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate), 9,

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14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 274, 335, 375, 601

Classification code M7

<u>ADR</u>

14.1 UN number or ID number UN3077

14.2 UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate)

14.3 Transport hazard class(es) 9
14.4 Packing group

Description UN3077, Environmentally hazardous substances, solid, n.o.s. (Tri-p-cresyl phosphate), 9,

III, (-) Yes

14.5 Environmental hazards

14.6 Special precautions for user

Special Provisions 274, 335, 601, 375

Classification code M7
Tunnel restriction code (-)

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Tri-p-cresyl phosphate	RG 34	-
78-32-0		

Germany

Water hazard class (WGK) non-hazardous to water (nwg)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Contact supplier for inventory compliance status
DSL/NDSL Contact supplier for inventory compliance status
EINECS/ELINCS Contact supplier for inventory compliance status
ENCS Contact supplier for inventory compliance status
IECSC Contact supplier for inventory compliance status
KECL Contact supplier for inventory compliance status
Contact supplier for inventory compliance status
Contact supplier for inventory compliance status

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AICS

Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method

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STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date

03-Aug-2021

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

End of Safety Data Sheet

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