SAFETY DATA SHEET

ADDITIN RC 3662

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	10/14/2020	203000009297	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ADDITIN RC 3662

Product code : 000000000062145086

Manufacturer or supplier's details

Company : LANXESS Corporation
Product Safety & Regulatory Affairs
111 RIDC Park West Drive
Pittsburgh, Pennsylvania 15275-1112

Responsible Department : (800) LANXESS
(412) 809-1000
lanxesshes@lanxess.com

Emergency telephone number : CHEMTREC (800) 424-9300 or
(703) 527-3887 (Outside U.S.A) and mention CCN12916.
Lanxess Emergency Phone (800) 410-3063.

Recommended use of the chemical and restrictions on use

Recommended use : Additive for lubricants

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of damaging fertility or the unborn child.

Precautionary statements :

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : Multi constituent substance

Components

Chemical name	CAS-No.	Concentration (% w/w)
Tricresyl Phosphate	1330-78-5	>= 90 - <= 100

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms appear.

In case of skin contact : Wash off with soap and plenty of water.
Get medical attention if symptoms occur.

In case of eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
Remove contact lenses.
Get medical attention if symptoms appear.

If swallowed : Rinse mouth with water.
Do not induce vomiting unless directed to do by medical personnel.
Get medical attention if symptoms appear.

Most important symptoms and effects, both acute and delayed

Symptoms : Adverse effects from repeated exposure may include toxic effects for reproduction

Effects	:	Suspected of damaging fertility or the unborn child.
Protection of first-aiders	:	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	In case of fire, use water spray (fog), foam, dry chemical or CO_2.
Unsuitable extinguishing media	:	Do not use water jet.
Specific hazards during fire-fighting	:	In a fire or if heated, a pressure increase will occur and the container may burst. Cool closed containers exposed to fire with water spray.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	No action shall be taken involving any personal risk or without suitable training. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapours or spray mist. Ensure adequate ventilation. Put on appropriate personal protection equipment.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Move containers from spill area. Wash spillages into an effluent treatment plant or proceed as follows.

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Dispose of wastes in an approved waste disposal facility.
Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems.
Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid exposure during pregnancy.
Avoid inhalation, ingestion and contact with skin and eyes.
Remove contaminated clothing and protective equipment before entering eating areas.
Workers should wash hands and face before eating, drinking and smoking.
Put on appropriate personal protection equipment.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Conditions for safe storage : Store in accordance with local regulations.
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.
Keep containers sealed until ready for use.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabeled containers.
Use appropriate container to avoid environmental contamination.
Empty containers retain residue and can be dangerous.
Do not reuse container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter can be used to minimize exposure.

Hand protection
- Material : Polyvinyl chloride - PVC
- Wearing time : < 60 min

Remarks : Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Wear suitable protective clothing.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
Appropriate techniques should be used to remove potentially contaminated clothing.
Wash contaminated clothing before reusing.
Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colourless
Odour	:	slight
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	-22 °F / -30 °C
Boiling point/boiling range	:	464 - 482 °F / 240 - 250 °C (5 hPa)
Flash point	:	> 446 °F / > 230 °C Method: DIN 51376, open cup
Evaporation rate	:	No data available

Self-ignition	:	No data available
Burning number	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0.0000195 hPa (77 °F / 25 °C)
Relative density	:	No data available
Density	:	1.175 - 1.185 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	insoluble
		< 0.1 g/l
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: 5.93 Method: measured
Auto-ignition temperature	:	> 932 °F / > 500 °C
Decomposition temperature	:	> 986 °F / > 530 °C
Viscosity		
Viscosity, dynamic	:	65 - 70 mPa.s
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials	:	Reducing agents Oxidizing agents Acids and bases
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

The most important known symptoms and effects are described in Section 2 and/or Section 4.

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute dermal toxicity	:	Acute toxicity estimate: 3,737 mg/kg Method: Calculation method

Components:

Tricresyl Phosphate:

Acute oral toxicity	:	LD50 (Rat, male and female): > 20,000 mg/kg Method: Standard acute method GLP: no
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 11.1 mg/l Exposure time: 1 h Test atmosphere: dust/mist Method: Standard acute method GLP: no Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Dosage caused no mortality
Acute dermal toxicity	:	LD50 (Rabbit, male and female): 3,700 mg/kg Method: Standard acute method GLP: no

Skin corrosion/irritation

Not classified based on available information.

Components:

Tricresyl Phosphate:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	Draize Test
GLP	:	no
Remarks	:	Mild skin irritation (not subject to classification)

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Tricresyl Phosphate:

Species	:	Rabbit
Result	:	No eye irritation
Exposure time	:	24 h
GLP	:	no

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Tricresyl Phosphate:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.
GLP	:	yes
Remarks	:	Not classified due to inconclusive data.

Germ cell mutagenicity

Not classified based on available information.

Components:

Tricresyl Phosphate:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: no Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: negative
GLP: no

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (female)
Cell type: In red blood cells
Application Route: Oral
Result: negative
GLP: no

Test Type: sister chromatid exchange assay
Species: Chinese hamster (male and female)
Cell type: Bone marrow
Application Route: Oral
Result: negative
GLP: yes

Carcinogenicity

Not classified based on available information.

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

Suspected of damaging fertility or the unborn child.

Components:

Tricresyl Phosphate:

Effects on fertility : Species: Mouse, male and female
Application Route: Oral
Dose: 62,5 - 124 - 250 milligram per kilogram
General Toxicity - Parent: LOAEL: 62.5 mg/kg body weight
General Toxicity F1: LOAEL: 62.5 mg/kg body weight
Target Organs: Testes
GLP: no

Effects on fetal development	:	Test Type: Embryo-foetal development Species: Rat, female Application Route: Oral Dose: 20 - 100 - 400 - 750 milligram per kilogram Duration of Single Treatment: 28 d General Toxicity Maternal: NOEL: 20 mg/kg body weight Developmental Toxicity: LOAEL: 20 mg/kg body weight Method: OPPTS 870.3700 GLP: yes
Reproductive toxicity - Assessment	:	Suspected of damaging fertility. (Causing atrophy of the testes), Suspected of damaging the unborn child. Exposure routes, oral

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Tricresyl Phosphate:

Species	:	Rat, male and female
LOAEL	:	50 mg/kg
Application Route	:	Oral
Exposure time	:	91 d
Number of exposures	:	5 days/week
Dose	:	50 - 100 - 200 - 400 - 800 mg/kg bw/day
GLP	:	yes
Remarks	:	Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Tricresyl Phosphate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.6 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: no GLP: no Remarks: Fresh water nominal concentration
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.146 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: Fresh water
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 2.5 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: Fresh water nominal concentration water extractable fraction NOEC (Pseudokirchneriella subcapitata (green algae)): > 2.5 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: Fresh water nominal concentration water extractable fraction
Toxicity to fish (Chronic toxicity)	:	NOEC (Jordanella floridae (flagfish)): 0.01 mg/l Exposure time: 28 d Analytical monitoring: yes GLP: no Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.1 mg/l Exposure time: 21 d Analytical monitoring: yes GLP: no Remarks: Fresh water
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l End point: Respiration inhibition Exposure time: 3 h Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: Fresh water nominal concentration

Persistence and degradability

Product:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 80 % Exposure time: 28 d Method: Regulation (EC) No. 440/2008, Annex, C.4-F

Components:

Tricresyl Phosphate:

Biodegradability	:	aerobic Inoculum: activated sludge, adapted Concentration: 30 mg/l Result: Inherently biodegradable. Biodegradation: 100 % Exposure time: 28 d Method: OECD Test Guideline 302C GLP: No information available.

Bioaccumulative potential

Components:

Tricresyl Phosphate:

Partition coefficient: n-octanol/water	:	log Pow: 5.93 (77 °F / 25 °C) GLP: no

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

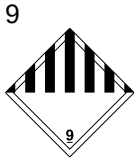
Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)
Waste from residues	:	The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Empty containers retain product residue; observe all precautions for product. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal, state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (TRIS(METHYLPHENYL) PHOSPHATE)
Class	:	9
Packing group	:	III
Labels	:	9
	:	
Packing instruction (cargo aircraft)	:	964 : 450.00 L
Packing instruction (passenger aircraft)	:	964 : 450.00 L
Environmentally hazardous	:	yes
		

IMDG-Code

UN number	:	UN 3082

Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIS(METHYLPHENYL) PHOSPHATE)
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 substance, liquid, n.o.s.
Class	:	9
Packing group	:	III
Labels	:	9
	:	
ERG Code	:	171
Marine pollutant	:	yes
		

Only bulk packages (greater than 119 Gallons) are regulated as marine pollutants when shipped by highway or rail.

Hazard and Handling Notes.	:	Environmentally hazardous substance., Keep separated from foodstuffs

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet.

Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

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

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Reproductive toxicity

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

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Tricresyl Phosphate	1330-78-5	>= 90 - < 100

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.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

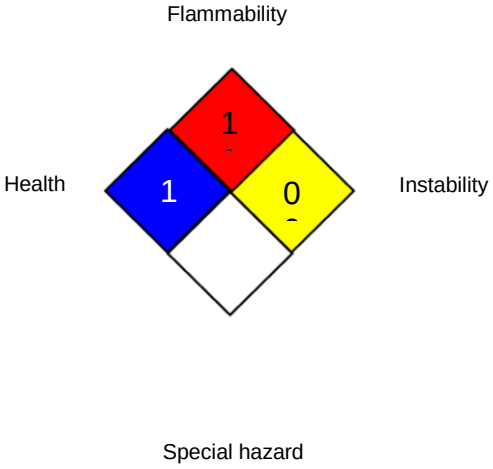
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

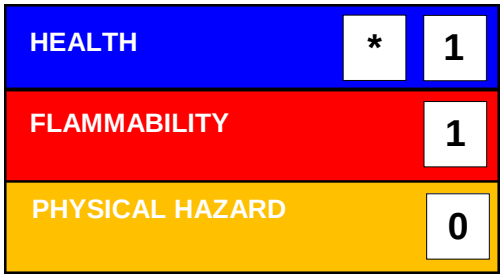
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory;

TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 10/14/2020

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. 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 to be a guidance for processing and does not contain any 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. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.