SAFETY DATA SHEET

ADDITIN RC 9330 N

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/03/2024	203000021116	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ADDITIN RC 9330 N

Product code : 000000000062629358

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 : 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)

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statements :

Prevention:

Avoid breathing mist or vapors.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.

Response:

IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal:

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

Additional Labeling

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 43.3 %

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
2,6-di-tert-butyl-p-cresol	128-37-0	>= 20 - < 30
Amines, C11-14-branched alkyl,	80939-62-4	>= 20 - < 30

monohexyl and dihexyl phosphates		
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7	>= 1 - < 5

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

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Get medical attention immediately.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

In case of skin contact : Wash off with soap and water.
Remove contaminated clothing and shoes.
Continue to rinse for at least 20 minutes.
Get medical attention if symptoms occur.
Wash contaminated clothing before reuse.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
Continue to rinse for at least 20 minutes.
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 occur.

Most important symptoms and effects, both acute and delayed

Symptoms : Eye: Causes irritation with symptoms of reddening, tearing, stinging, and swelling.
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.
Skin: Causes irritation with symptoms of reddening, itching, and swelling.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Effects	:	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx) phosphorus oxide (P_2O_5)
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	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. Put on appropriate personal protection equipment. Do not touch or walk through spilled material. Evacuate unnecessary personnel. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Do not breathe vapors, aerosols.
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	:	Keep in suitable, closed containers for disposal. 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, 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). Dispose of wastes in an approved waste disposal facility. Do not allow into the sewerage system, surface waters or groundwater or into the soil. Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	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. Avoid inhalation, ingestion and contact with skin and eyes. Use only with adequate ventilation. Persons with a history of skin sensitization to this product should not be employed in any process in which this product is used.
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.
Further information on storage stability	:	Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2,6-di-tert-butyl-p-cresol	128-37-0	TWA (Inhalable fraction and vapor)	2 mg/m3	ACGIH

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 : No personal respiratory protective equipment normally required.
In the case of vapor formation use a respirator with an approved filter.
In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hand protection
- Material : Nitrile rubber
- Wearing time : < 60 min
- Remarks : After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations

Eye protection : Safety glasses

Skin and body protection : Impervious clothing
Protective suit

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	:	Oily liquid.
Physical state	:	liquid
Color	:	light yellow
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	309 °F / 154 °C Method: ASTM D 93, Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.95 g/cm3 (68 °F / 20 °C)
Solubility(ies) Water solubility	: :	 slightly soluble
Partition coefficient: n-octanol/water	:	No data available

Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	95.6 mm2/s (104 °F / 40 °C)
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	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No data available
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

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

Acute oral toxicity	:	LD50 (Rat, male and female): > 2,930 mg/kg Method: OECD Test Guideline 401 GLP: Yes Assessment: The substance or mixture has no acute oral toxicity Remarks: Dosage caused no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: Yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Dosage caused no mortality

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

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

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
GLP: Yes
Remarks: Extrapolation according to Regulation (EC) No. 440/2008

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Acute oral toxicity : LD50 (Rat, male and female): 3,313 mg/kg
Method: OECD Test Guideline 401
GLP: No
Remarks: Test results on an analogous product

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: Yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Test results on an analogous product

Skin corrosion/irritation

Causes skin irritation.

Components:

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

Species : Rabbit
Method : Draize Test
Result : No skin irritation

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Irritating to skin.

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Species : Rabbit
Method : Draize Test

Result	:	Irritating to skin.
GLP	:	No
Remarks	:	Test results on an analogous product

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

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

Species	:	Rabbit
Result	:	No eye irritation
Method	:	Draize Test

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Species	:	Rabbit
Result	:	Irritating to eyes.
Method	:	OECD Test Guideline 405

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
GLP	:	No
Remarks	:	Test results on an analogous product

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

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

Test Type	:	Patch Test
Routes of exposure	:	Skin contact
Species	:	Human
Result	:	Does not cause skin sensitization.

Test Type	:	No data available
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	No information available.
Result	:	Did not cause sensitization on laboratory animals.
GLP	:	No

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	The product is a skin sensitiser, sub-category 1B.
GLP	:	Yes
Remarks	:	Test results on an analogous product

Germ cell mutagenicity

Not classified based on available information.

Components:

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

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 information available.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: No information available.
Result: negative
GLP: No information available.

Test Type: HPRT test
Test system: rat hepatocytes
Metabolic activation: with metabolic activation
Method: No information available.
Result: negative
GLP: No information available.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: No information available.

Result: negative
GLP: No information available.

Test Type: Cytogenetic assay
Species: Rat (male)
Cell type: Bone marrow
Application Route: Oral
Method: No information available.
Result: negative
GLP: No information available.

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Genotoxicity in vitro : Test system: Bacteria
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

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
Remarks: Test results on an analogous product

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476

Result: negative
GLP: Yes
Remarks: Test results on an analogous product

Test Type: Micronucleus test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: Yes
Remarks: Test results on an analogous product

Carcinogenicity

Not classified based on available information.

Components:

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

Species	:	Rat, male and female
Application Route	:	Oral
Exposure time	:	22 month(s)
Dose	:	0 - 25 - 100 - 250/500 mg/kg body weight
NOAEL	:	25 mg/kg bw/day
Method	:	No information available.
Result	:	equivocal
GLP	:	Yes
Carcinogenicity - Assessment	:	Carcinogenicity classification not possible from current data.

IARC No ingredient 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 ingredient 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

Not classified based on available information.

Components:

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

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 0 - 25 - 100 - 250/500

Fertility: NOAEL: 500 mg/kg body weight
Result: Animal testing did not show any effects on fertility.
GLP: Yes

Effects on fetal development : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 0 - 25 - 100 - 250/500 milligram per kilogram
General Toxicity Maternal: NOAEL: 100 mg/kg body weight
Developmental Toxicity: NOAEL: 100 mg/kg body weight
Method: No information available.
Result: Embryotoxic effects and adverse effects on the off-spring were detected only at high maternally toxic doses
GLP: Yes

Test Type: Pre-natal
Species: Mouse, female
Application Route: Oral
Dose: 70 - 240 - 800 milligram per kilogram
General Toxicity Maternal: NOAEL: 240 mg/kg body weight
Developmental Toxicity: NOAEL: 800 mg/kg body weight
Method: No information available.
Result: Did not show teratogenic effects in animal experiments.
GLP: No information available.

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Early Embryonic Development: NOAEL: 10 mg/kg body weight
Symptoms: No effects on early embryonic development.
Method: OECD Test Guideline 422

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
Dose: 0 - 15 - 45 - 150 mg/kg bw/day
General Toxicity Parent: NOAEL: 45 mg/kg bw/day
Fertility: NOAEL: 150 mg/kg bw/day
Early Embryonic Development: NOAEL: 45 mg/kg bw/day
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: Yes
Remarks: Test results on an analogous product

Effects on fetal development : Test Type: Pre-natal

Species: Rat, female
Application Route: Oral
Dose: 0 - 15 - 45 - 150 mg/kg bw/day
General Toxicity Maternal: NOAEL: 45 mg/kg bw/day
Teratogenicity: NOAEL: 150 mg/kg bw/day
Developmental Toxicity: NOAEL: 150 mg/kg bw/day
Embryo-fetal toxicity.: NOAEL: 150 mg/kg bw/day
Method: OECD Test Guideline 414
Result: Did not show teratogenic effects in animal experiments.
GLP: Yes
Remarks: Test results on an analogous product

STOT-single exposure

May cause respiratory irritation.

Components:

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

Assessment	:	May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

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

Species	:	Rat, male and female
NOAEL	:	25 mg/kg
LOAEL	:	100 mg/kg
Application Route	:	Oral
Exposure time	:	22 Months
Number of exposures	:	daily
Dose	:	0 - 25 - 100 - 250/500 mg/kg bw/day
Method	:	No information available.
GLP	:	Yes
Symptoms	:	alteration in liver enzymes
Remarks	:	Chronic toxicity
Species	:	Pig, male and female
	:	1500 ppm
Application Route	:	Oral
Exposure time	:	42 Days
Number of exposures	:	daily
Dose	:	0 - 150 - 1000 - 1500 parts per million
Method	:	No information available.
GLP	:	Yes

Remarks : Subacute toxicity

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Species	:	Rat, male and female
NOAEL	:	150 mg/kg
Application Route	:	Oral
Exposure time	:	90 Days
Number of exposures	:	daily
Dose	:	0 - 15 - 45 - 150 mg/kg bw/day
Method	:	OECD Test Guideline 408
GLP	:	Yes
Remarks	:	Subchronic toxicity Test results on an analogous product

Species	:	Rat, male and female
NOAEL	:	45 mg/kg
LOAEL	:	150 mg/kg
Application Route	:	Oral
Number of exposures	:	daily
Dose	:	0 - 15 - 45 - 150 mg/kg bw/day
Method	:	OECD Test Guideline 422
GLP	:	Yes
Remarks	:	Test results on an analogous product

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

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

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 0.57 mg/l Exposure time: 96 h Test Type: semi-static test Method: Regulation (EC) No. 440/2008, Annex, C.1 GLP: Yes Remarks: Fresh water
Toxicity to daphnia and other	:	EC50 (Daphnia magna (Water flea)): 0.48 mg/l

aquatic invertebrates		End point: Immobilization 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	:	ErC50 (Desmodesmus subspicatus (green algae)): > 0.4 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: Yes Method: Regulation (EC) No. 440/2008, Annex, C.3 GLP: Yes Remarks: Fresh water EC10 (Desmodesmus subspicatus (green algae)): 0.4 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: Yes Method: Regulation (EC) No. 440/2008, Annex, C.3 GLP: Yes Remarks: Fresh water
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): 0.053 mg/l Exposure time: 42 d Test Type: flow-through test Analytical monitoring: Yes Method: OECD Test Guideline 210 GLP: Yes Remarks: Fresh water
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.023 mg/l End point: Reproduction Exposure time: 21 d Test Type: semi-static test Analytical monitoring: Yes Method: OECD Test Guideline 202 GLP: Yes Remarks: Fresh water
Toxicity to microorganisms	:	EC50 (activated sludge): > 10,000 mg/l End point: Respiration inhibition Exposure time: 3 h Test Type: static test Analytical monitoring: No Method: OECD Test Guideline 209 GLP: Yes

Remarks: Fresh water
nominal concentration

Toxicity to soil dwelling organisms : Test Type: Reproduction Test
NOEC (Eisenia fetida (earthworms)): 25 mg/kg
Exposure time: 28 d
End point: Reproduction
Method: OECD Test Guideline 222
GLP: Yes

Plant toxicity : NOEC: 4.74 mg/kg
Exposure time: 17 d
End point: Growth inhibition
Species: Allium cepa
Method: OECD Test Guideline 208
GLP: Yes

EC50: 20.9 mg/kg
Exposure time: 17 d
End point: Growth inhibition
Species: Allium cepa
Method: OECD Test Guideline 208
GLP: Yes

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.2 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (microalgae)): > 10 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC50 (Pseudokirchneriella subcapitata (algae)): > 10
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.3 mg/l

Exposure time: 96 h
Test Type: static test
Analytical monitoring: No
Method: OECD Test Guideline 203
GLP: No
Remarks: Fresh water
nominal concentration
Test results on an analogous product

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.05 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: Yes
Method: OECD Test Guideline 202
GLP: Yes
Remarks: Fresh water
nominal concentration
Test results on an analogous product

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 0.976 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: Yes
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water
nominal concentration
Test results on an analogous product

EC10 (Desmodesmus subspicatus (green algae)): 0.658 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: Yes
Method: OECD Test Guideline 201
GLP: Yes
Remarks: Fresh water
nominal concentration
Test results on an analogous product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.35 mg/l
End point: Reproduction
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: No
Method: OECD Test Guideline 211
GLP: Yes
Remarks: Fresh water
nominal concentration

Test results on an analogous product

EC10 (Daphnia magna (Water flea)): 0.435 mg/l
End point: Reproduction
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: No
Method: OECD Test Guideline 211
GLP: Yes
Remarks: Fresh water
nominal concentration
Test results on an analogous product

Toxicity to microorganisms : EC20 (activated sludge): 15 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Analytical monitoring: No
Method: OECD Test Guideline 209
GLP: No
Remarks: Fresh water
nominal concentration
Test results on an analogous product

EC50 (activated sludge): 69 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Analytical monitoring: No
Method: OECD Test Guideline 209
GLP: No
Remarks: Fresh water
nominal concentration
Test results on an analogous product

Persistence and degradability

Components:

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

Biodegradability : aerobic
Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 4.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
GLP: No information available.

Stability in water : Degradation half life (DT50): 4 - 8 d
Hydrolysis: at 20 °C

Photodegradation : Sensitizer: OH
Degradation (indirect photolysis):
Degradation half life: 21.054 h

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 12 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

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

Bioaccumulation : Bioconcentration factor (BCF): > 2,000

Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 781
Exposure time: 56 d
Temperature: 77 °F / 25 °C
Concentration: 0.05 mg/l
Method: OECD Test Guideline 305
GLP: No information available.

Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 839
Exposure time: 56 d
Temperature: 77 °F / 25 °C
Concentration: 0.005 mg/l
Method: OECD Test Guideline 305
GLP: No information available.

Partition coefficient: n-octanol/water : log Pow: 5.1
Method: measured

Mobility in soil

Components:

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

Mobility : Medium: Soil
Content: 82.9 %
Method: Calculation, Mackay Level III Fugacity Model

Medium: Water
Content: 8.53 %
Method: Calculation, Mackay Level III Fugacity Model

Medium: Sediment
Content: 7.23 %
Method: Calculation, Mackay Level III Fugacity Model

Medium: Air
Content: 1.33 %
Method: Calculation, Mackay Level III Fugacity Model

Distribution among environmental compartments : log Koc: 4.17
Method: estimated

Stability in soil : Test Type: aerobic degradation
Soil temperature: 54 °F / 12 °C
Radio label: Yes
pH: 5.7
Cation exchange capacity: 16 m_/kg
Biomass: 214 mg/kg
Method: OECD Test Guideline 307
GLP: Yes

Test Type: aerobic degradation
Soil temperature: 54 °F / 12 °C
Radio label: Yes
pH: 6.6
Cation exchange capacity: 47 m_/kg
Biomass: 265.7 mg/kg
Method: OECD Test Guideline 307
GLP: Yes

Test Type: aerobic degradation
Soil temperature: 54 °F / 12 °C
Radio label: Yes
pH: 7.4
Cation exchange capacity: 265 m_/kg
Biomass: 531.8 mg/kg
Method: OECD Test Guideline 307
GLP: Yes

Test Type: aerobic degradation
Soil temperature: 54 °F / 12 °C
Radio label: Yes
pH: 7.2
Cation exchange capacity: 257 m_/kg
Biomass: 938.7 mg/kg
Method: OECD Test Guideline 307
GLP: Yes

Other adverse effects

Components:

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

Results of PBT and vPvB assessment	:	Substance is not persistent, bioaccumulative, and toxic (PBT). Substance is not very persistent and very bioaccumulative (vPvB).

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. (2,6-DI-TERT-BUTYL-P-CRESOL)
Class	:	9
Packing group	:	III
Labels	:	9
	:	
Packing instruction (cargo	:	964 : 450.00 L

aircraft)

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. (2,6-DI-TERT-BUTYL-P-CRESOL)
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.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (2,6-DI-TERT-BUTYL-P-CRESOL)
Class	:	9
Packing group	:	III
Labels	:	9
	:	

ERG Code	:	171
Marine pollutant	:	yes

Hazard and Handling Notes.
Environmentally hazardous substance.
Irritating to skin and eyes.
Keep separated from foodstuffs
The U.S. DOT regulations in 49 CFR 172.102 permit this material to ship as an Environmentally Hazardous Substance, Class 9, using Special Provision 146.

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

Listed substances in the product are at low enough levels to not be expected to exceed the 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 : Respiratory or skin sensitization
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

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

2,6-di-tert-butyl-p-cresol	128-37-0	20 - 30

Pennsylvania Right To Know

Proprietary non-hazardous ingredient	Trade Secret	> 1
2,6-di-tert-butyl-p-cresol	128-37-0	20 - 30
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	20 - 30
bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine	15721-78-5	> 1

methanol	67-56-1	< 0.1

California Prop. 65

WARNING: This product can expose you to chemicals including methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

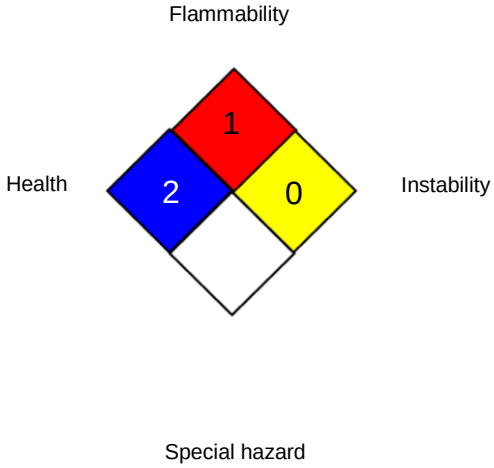
No substances are subject to a Significant New Use Rule.

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

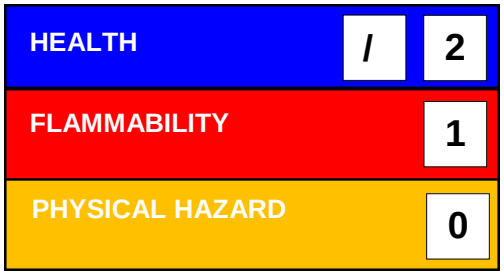
SECTION 16. OTHER INFORMATION

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

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA : 8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals 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 : 04/03/2024

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.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.