SAFETY DATA SHEET

ADDITIN RC 9321 D

Version	Revision Date:	SDS Number:	Date of last issue: 02/17/2022
4.0	08/18/2022	203000013850	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ADDITIN RC 9321 D

Product code : 000000000057929764

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

Skin sensitization : Category 1

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : Causes skin irritation.

May cause an allergic skin reaction.
Suspected of causing cancer.
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.
Avoid breathing mist or vapors.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF ON SKIN: Wash with plenty of soap and water.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

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 : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
2,6-di-tert-butylphenol	128-39-2	>= 30 - < 50
Proprietary amine reaction product	Trade Secret	>= 20 - < 30
Proprietary mineral oil	Trade Secret	>= 1 - < 5
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7	>= 1 - < 5
Proprietary acid reaction product	Trade Secret	>= 1 - < 5
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	>= 1 - < 5
diphenylamine	122-39-4	>= 0.1 - < 1

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	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
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. 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	:	Skin: Causes irritation with symptoms of reddening, itching, and swelling. Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels. Adverse symptoms sometimes include the following: Effects on fertility. Effects on fetal development. carcinogenic effects
Effects	:	Causes skin irritation. May cause an allergic skin reaction. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.
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	:	Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon monoxide Carbon dioxide (CO2) Nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus phosphorus oxide (P_2O_5)
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 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	:	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 protection against fire and explosion : Normal measures for preventive fire protection.

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.
Persons with a history of skin sensitization to this product should not be employed in any process in which this product is used.
Avoid inhalation, ingestion and contact with skin and eyes.
Use only with adequate ventilation.
Avoid exposure during pregnancy.

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 container closed when not in 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

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Proprietary mineral oil	Trade Secret	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
diphenylamine	122-39-4	TWA	10 mg/m3	ACGIH

Engineering measures : If user operations generate dust, fumes or mist, use ventila-

tion to keep exposure to airborne contaminants below the exposure limit.

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.
NIOSH approved air-purifying organic vapor and acid gas respirator.

Hand protection
Material : Nitrile rubber - NBR
Wearing time : < 60 min

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

Eye protection : Safety glasses with side-shields

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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

Physical state : liquid

Color : yellow

Odor : characteristic

Odor Threshold : No data available

pH : Not applicable

Melting point/range	:	-0.40 °F / -18 °C
Boiling point/boiling range	:	(1,013 hPa) Not applicable
Flash point	:	> 284 °F / > 140 °C Method: DIN ISO 2592, 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
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	1 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	Description: soluble
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	82.6 cSt (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.

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

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

Components:

2,6-di-tert-butylphenol:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 10,000 mg/kg

Proprietary amine reaction product:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: no Assessment: The substance or mixture has no acute dermal toxicity

Remarks: Dosage caused no mortality

Proprietary mineral oil:

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

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

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

Acute oral toxicity : LD50 (Rat): 3,313 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Proprietary acid reaction product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: Extrapolation according to Regulation (EC) No. 440/2008
GLP: yes
Remarks: Dosage caused no mortality

LD50 (Rat): > 2,000 mg/kg
Method: OPPTS 870.1100
GLP: yes
Remarks: Dosage caused no mortality

LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes
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

diphenylamine:

Acute oral toxicity : LD50 (Rat): 1,165 mg/kg

LD50 (Rat): 800 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Components:

2,6-di-tert-butylphenol:

Result : Irritating to skin.

Proprietary amine reaction product:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Mild skin irritation
GLP : no

Proprietary mineral oil:

Result : No skin irritation

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

Species : Rabbit
Exposure time : 24 h
Result : Irritating to skin.

Proprietary acid reaction product:

Assessment : Irritating to skin.
Method : OECD Test Guideline 431
Result : irritating

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

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

diphenylamine:

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

Serious eye damage/eye irritation

Not classified based on available information.

Components:

2,6-di-tert-butylphenol:

Species	:	Rabbit
Result	:	No eye irritation

Proprietary amine reaction product:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
GLP	:	no

Proprietary mineral oil:

Result	:	No eye irritation

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

Species	:	Rabbit
Result	:	No eye irritation

Proprietary acid reaction product:

Result	:	No eye irritation
Method	:	OECD Test Guideline 437

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

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

diphenylamine:

Species	:	Rabbit
Result	:	Irritating to eyes.
Method	:	Draize Test

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Proprietary amine reaction product:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes

Proprietary mineral oil:

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-:

Routes of exposure	:	Dermal
Species	:	Guinea pig
Result	:	May cause sensitization by skin contact.

Proprietary acid reaction product:

Test Type	:	Buehler Test
Routes of exposure	:	Dermal
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

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.

diphenylamine:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Not classified based on available information.

Components:

Proprietary amine reaction product:

Genotoxicity in vitro	:	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

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
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: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
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: yes
Remarks: Test results on an analogous product

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
Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative
GLP: no
Remarks: Test results on an analogous product

Proprietary mineral oil:

Genotoxicity in vitro : Test system: Mammalian-Animal
Method: OECD Test Guideline 473

Result: negative

Proprietary acid reaction product:

Genotoxicity in vitro : Test Type: gene mutation test
Test system: mouse lymphoma cells
Method: OECD Test Guideline 473
Result: negative

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

diphenylamine:

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: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with metabolic activation
Method: OECD Test Guideline 473
Result: positive
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells

Metabolic activation: without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with metabolic activation
Method: OECD Test Guideline 476
Result: positive
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Cell type: Liver cells
Application Route: Oral
Method: OECD Test Guideline 486
Result: negative
GLP: yes

Carcinogenicity

Suspected of causing cancer.

Components:

2,6-di-tert-butylphenol:

Remarks : No known significant effects or critical hazards.

Proprietary mineral oil:

Carcinogenicity - Assessment : Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

diphenylamine:

Species	:	Rat, male
Application Route	:	Oral
Exposure time	:	2 Years
Dose	:	0 - 250 - 1000 - 4000 parts per million
NOAEL	:	250 ppm
Method	:	OECD Test Guideline 451
Result	:	positive
GLP	:	yes

Remarks	:	Animal experiments showed a statistically significant number of tumors.

Species	:	Rat, female
Application Route	:	Oral
Exposure time	:	2 Years
Dose	:	0 - 250 - 1000 - 4000 parts per million
LOAEL	:	250 parts per million
Method	:	OECD Test Guideline 451
Result	:	positive
GLP	:	yes
Remarks	:	Animal experiments showed a statistically significant number of tumors.

Species	:	Mouse, male
Application Route	:	Oral
Exposure time	:	2 Years
Dose	:	0 - 250 - 1000 - 4000 parts per million
LOAEL	:	250 parts per million
Method	:	OECD Test Guideline 451
Result	:	positive
GLP	:	yes
Remarks	:	Animal experiments showed a statistically significant number of tumors.

Species	:	Mouse, female
Application Route	:	Oral
Exposure time	:	2 Years
Dose	:	0 - 250 - 1000 - 4000 parts per million
LOAEL	:	250 parts per million
Method	:	OECD Test Guideline 451
Result	:	negative
GLP	:	yes
Remarks	:	Animal testing did not show any carcinogenic effects.

Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

IARC Group 2B: Possibly carcinogenic to humans

diphenylamine	122-39-4

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

Suspected of damaging fertility or the unborn child.

Components:

Proprietary amine reaction product:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 25-75-225 milligram per kilogram
General Toxicity Parent: NOAEL: 25 mg/kg bw/day
Fertility: NOEL: 225 mg/kg bw/day
Method: OECD Test Guideline 422
Result: Animal testing did not show any effects on fertility.
GLP: yes

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rabbit, female
Application Route: Oral
Dose: 10-30-100 milligram per kilogram
General Toxicity Maternal: NOAEL: 30 mg/kg bw/day
Teratogenicity: NOAEL: 100 mg/kg bw/day
Developmental Toxicity: NOEL: 30 mg/kg bw/day
Method: OECD Test Guideline 414
Result: Embryotoxic effects and adverse effects on the off-spring were detected only at high maternally toxic doses
GLP: yes

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

Proprietary mineral oil:

Effects on fetal development : Species: Rat
Application Route: Dermal
Dose: 0 - 2000 milligram per kilogram
Result: No teratogenic potential.

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

Effects on fertility : General Toxicity Parent: NOAEL: 45 mg/kg body weight
Fertility: NOAEL: 150 mg/kg body weight
Early Embryonic Development: NOAEL: 45 mg/kg body weight

Proprietary acid reaction product:

Effects on fetal development : Species: Rat
Application Route: Oral
Dose: 75 milligram per kilogram
Developmental Toxicity: NOAEL: 75 mg/kg body weight
Method: OECD Test Guideline 422
Result: Some evidence of adverse effects on development, based on animal experiments.

GLP: yes

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

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

STOT-single exposure

Not classified based on available information.

Components:

Proprietary mineral oil:

Assessment : May cause respiratory irritation.

diphenylamine:

Target Organs : Blood
Assessment : May cause damage to organs.

STOT-repeated exposure

Not classified based on available information.

Components:

diphenylamine:

Routes of exposure : Ingestion
Target Organs : spleen, Liver, Kidney
Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Proprietary amine reaction product:

Species : Rat, male and female
NOAEL : 25 mg/kg
Application Route : Oral
Exposure time : 28 d
Number of exposures : daily
Dose : 25-75-225 mg/kg bw/d
Method : OECD Test Guideline 422

GLP : yes
Remarks : Subacute toxicity

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

Species : Rat
NOAEL : 45 mg/kg
Application Route : Oral

diphenylamine:

Species : Rat, male and female
NOAEL : 3 mg/kg
LOAEL : 30 mg/kg
Application Route : Oral
Exposure time : 2 a
Number of exposures : daily
Dose : 0,3-3-30-150-300 mg/kg bw/d
Method : OECD Test Guideline 452
GLP : No information available.
Remarks : Chronic toxicity

Species : Dog, male and female
NOAEL : 2 mg/kg
LOAEL : 20 mg/kg
Application Route : Oral
Exposure time : 737 d
Number of exposures : daily
Dose : 2 - 20 - 200 mg/kg bw/day
Method : OECD Test Guideline 452
GLP : No information available.
Remarks : Chronic toxicity

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2,6-di-tert-butylphenol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1.4 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50: 0.45 mg/l
Exposure time: 48 h

M-Factor (Acute aquatic tox- : 1

icity)

Toxicity to fish (Chronic toxicity)	:	LC50: 0.006 mg/l Exposure time: 60 Days
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC50: > 1,000 mg/l Exposure time: 3 h

Proprietary amine reaction product:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100 mg/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: no Remarks: Fresh water nominal concentration
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 51 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: Fresh water nominal concentration
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 201 GLP: no Remarks: Fresh water nominal concentration NOEC (Desmodesmus subspicatus (green algae)): > 10 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 201 GLP: no Remarks: Fresh water

nominal concentration

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EL10 (Daphnia magna (Water flea)): 1.69 mg/l
End point: Reproduction
Exposure time: 21 Days
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: no
Remarks: Fresh water
nominal concentration

Proprietary mineral oil:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 5,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h

EL50 (Daphnia magna (Water flea)): > 100,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 202

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Fresh water

Toxicity to microorganisms : IC50 (Desmodesmus subspicatus (green algae)): > 1,000 mg/l
Exposure time: 96 h

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
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC10 (Daphnia magna (Water flea)): 1.93 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 0.976 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Desmodesmus subspicatus (green algae)): 0.658 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Bacteria): 13 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Proprietary acid reaction product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1,000 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 GLP: yes NOEC (Oncorhynchus mykiss (rainbow trout)): 1,000 mg/l Method: OECD Test Guideline 203 GLP: yes Lowest Observed Effect Concentration (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes NOEC (Daphnia magna (Water flea)): 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes Lowest Observed Effect Concentration (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 496 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): 318 mg/l
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50: 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

NOEC: 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

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

diphenylamine:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2 mg/l
Exposure time: 48 h
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

EC50 (Daphnia magna (Water flea)): 1.2 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.17 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.37 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.16 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 202

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

2,6-di-tert-butylphenol:

Biodegradability : Result: Not readily biodegradable.

Proprietary amine reaction product:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 20.1 mg/l
Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Proprietary mineral oil:

Biodegradability : aerobic
Concentration: 44 mg/l

Result: Inherently biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Proprietary acid reaction product:

Biodegradability : Concentration: 3.77 mg/l
Result: Not readily biodegradable.
Biodegradation: 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

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

diphenylamine:

Biodegradability : aerobic
Concentration: 1.9 mg/l
Result: Not readily biodegradable.
Biodegradation: 26 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: No information available.

Bioaccumulative potential

Components:

2,6-di-tert-butylphenol:

Partition coefficient: n-octanol/water : log Pow: 4.92

Proprietary amine reaction product:

Partition coefficient: n-octanol/water : log Pow: 6.66 (73 °F / 23 °C)
pH: 6.67
Method: OECD Test Guideline 123
GLP: yes
Remarks: Based on data from similar materials

Proprietary mineral oil:

Partition coefficient: n-octanol/water : log Pow: > 6

diphenylamine:

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: 3.82 (68 °F / 20 °C)
Method: OECD Test Guideline 107

Mobility in soil

Components:

Proprietary acid reaction product:

Distribution among environmental compartments : Koc: 269153.48
Method: OECD Test Guideline 121

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.

(2,6-DI-TERT-BUTYLPHENOL)

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. (2,6-DI-TERT-BUTYLPHENOL)
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

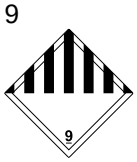
Not applicable for product as supplied.

Domestic regulation

49 CFR

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

Labels : 9
:



ERG Code : 171
Marine pollutant : yes

Hazard and Handling Notes.
Environmentally hazardous substance., Irritating to skin., 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 : Respiratory or skin sensitization
Carcinogenicity
Reproductive toxicity
Skin corrosion or irritation

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-butylphenol	128-39-2	>= 30 - < 50
Proprietary amine reaction product	Trade Secret	>= 20 - < 25
Proprietary mineral oil	Trade Secret	>= 1 - < 5

Pennsylvania Right To Know

2,6-di-tert-butylphenol	128-39-2	>= 30 - < 50

Proprietary amine reaction product	Trade Secret	>= 20 - < 25
Proprietary methylene ester	Trade Secret	>= 20 - < 25
Proprietary mineral oil	Trade Secret	>= 1 - < 5
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7	>= 1 - < 5
Proprietary phosphorus compound	Trade Secret	>= 1 - < 5
Proprietary acid reaction product	Trade Secret	>= 1 - < 5
diphenylamine	122-39-4	>= 0.1 - < 0.25

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

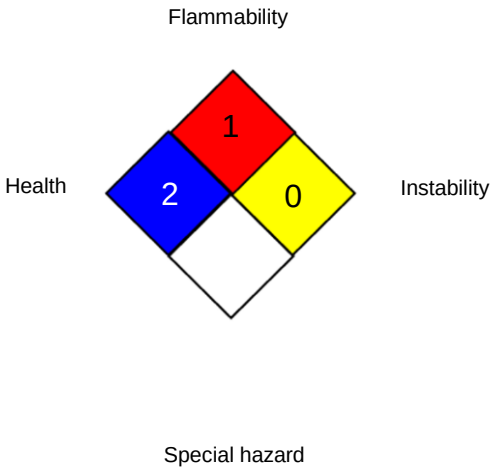
No substances are subject to a Significant New Use Rule.

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

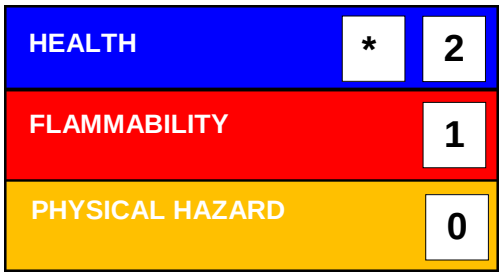
SECTION 16. OTHER INFORMATION

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 : 08/18/2022

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.