SECTION 1. IDENTIFICATION

Product name : ADDITIN RC 9200 N

Product code : 000000000056549637

Manufacturer or supplier's details

Company : LANXESS Corporation
Product Safety & Regulatory Affairs
111 RIDC Park West Drive
15275-1112 Pittsburgh, United States of America

Responsible Department : +1800LANXESS

Emergency telephone : Chemtrec (800) 424-9300
International (703) 527-3887
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

Serious eye damage : Category 1

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Causes skin irritation.
Causes serious eye damage.
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.
Wash skin thoroughly after handling.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation 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

Chemical nature : Preparation containing zinc dialkyl dithiophosphate, alkyl phenol, and alkyl aryl sulfonate calcium.

Components

Chemical name	CAS-No.	Concentration (% w/w)
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	4259-15-8	>= 50 - < 70
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	>= 10 - < 20
2,6-di-tert-butylphenol	128-39-2	>= 5 - < 10
9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine	68478-81-9	>= 1 - < 5
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	>= 1 - < 5
zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	4259-15-8	>= 50 - < 70
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	>= 10 - < 20
2,6-di-tert-butylphenol	128-39-2	>= 5 - < 10
9-Octadecenoic acid (Z)-, reaction	68478-81-9	>= 1 - < 5

products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine		
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	>= 1 - < 5
Tolytriazole	29385-43-1	>= 0.1 - < 1

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

SECTION 4. FIRST AID MEASURES

If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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 immediately with soap and plenty of water.
Remove contaminated clothing and shoes.
Continue to rinse for at least 10 minutes.
Call a physician if irritation develops or persists.
Wash contaminated clothing before reuse.

In case of eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
Remove contact lenses.
Continue to rinse for at least 20 minutes.
Chemical burns must be treated promptly by a physician.

If swallowed : Rinse mouth with water.
Do not induce vomiting. Drink water. Call physician immediately.
If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms and effects, both acute and delayed

Symptoms : Eye: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.
Skin: Causes irritation with symptoms of reddening, itching, and swelling.
Adverse symptoms sometimes include the following:
Effects on fetal development.

Effects	:	Causes skin irritation. Causes serious eye damage. 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	:	No special actions required. Treat symptomatically. Serious effects may be delayed following exposure.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In case of fire, use water spray (fog), foam or dry chemical.
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. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Sulfur oxides Oxides of phosphorus Metal oxides Nitrogen oxides (NOx)
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. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Put on appropriate personal protection equipment.
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with

soil, waterways, drains and sewers.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Stop leak if safe to do so.
Move containers from spill area.
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.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid inhalation, ingestion and contact with skin and eyes.
Avoid exposure during pregnancy.
Use only with adequate ventilation/personal protection.
Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Empty containers retain product residue; observe all precautions for product.
Do not re-use empty containers.
Remove contaminated clothing and protective equipment before entering eating areas.
Workers should wash hands and face before eating, drinking and smoking.
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 which are opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabeled containers.
Use appropriate container to avoid environmental contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	TWA (Mist)	5 mg/m3	OSHA Z-1
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH

Engineering measures : Use only with adequate ventilation.
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.
Recommended:
NIOSH approved, air-purifying organic vapor respirator.

Hand protection
Material : PVC
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 : 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

Physical state : liquid

Color	:	dark, brown
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range	:	-17 °F / -27 °C
Boiling point/boiling range	:	No data available
Flash point	:	288 °F / 142 °C Method: 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	:	1.03 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	145 mm2/s (104 °F / 40 °C) Method: DIN 51562

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	:	No decomposition if stored and applied as directed. The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	Reducing agents Oxidizing agents Acids and bases
Hazardous decomposition products	:	Spontaneous decomposition may start at 150°C. After prolonged heating, slow decomposition may start at above 80°C. Formation of alkylmercaptans, dialkylsulphides, traces of hydrogen sulphide possible.

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: 4,458 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Acute oral toxicity : LD50 (Rat): > 3,100 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

Distillates (petroleum), hydrotreated light paraffinic:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Remarks: Test results on an analogous product

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Test results on an analogous product

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

2,6-di-tert-butylphenol:

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

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

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Dosage caused no mortality
Test results on an analogous product

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: No information available.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Dosage caused no mortality
Test results on an analogous product

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Dosage caused no mortality
Test results on an analogous product

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Acute oral toxicity : LD50 (Rat): > 3,100 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

Distillates (petroleum), hydrotreated light paraffinic:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Remarks: Test results on an analogous product

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: Test results on an analogous product

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

2,6-di-tert-butylphenol:

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

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

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Dosage caused no mortality
Test results on an analogous product

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.53 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: No information available.
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Dosage caused no mortality
Test results on an analogous product

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

Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Dosage caused no mortality
Test results on an analogous product

Tolytriazole:

Acute oral toxicity	:	LD50 (Rat, male and female): 720 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute inhalation toxicity	:	LC0 (Rat, male and female): > 1.7 mg/l Exposure time: 1 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 5,000 mg/kg GLP: yes Remarks: Extrapolation according to Regulation (EC) No. 440/2008

Skin corrosion/irritation

Causes skin irritation.

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species	:	Rabbit
Result	:	No skin irritation

Distillates (petroleum), hydrotreated light paraffinic:

Species	:	Rabbit
Method	:	Draize Test
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Test results on an analogous product

2,6-di-tert-butylphenol:

Result	:	Irritating to skin.

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Test results on an analogous product

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species	:	Rabbit
Result	:	No skin irritation

Distillates (petroleum), hydrotreated light paraffinic:

Species	:	Rabbit
Method	:	Draize Test
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Test results on an analogous product

2,6-di-tert-butylphenol:

Result	:	Irritating to skin.

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Test results on an analogous product

Tolytriazole:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species	:	Rabbit
Result	:	Risk of serious damage to eyes.

Distillates (petroleum), hydrotreated light paraffinic:

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

2,6-di-tert-butylphenol:

Species	:	Rabbit
Result	:	No eye irritation

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

Result	:	No eye irritation
Method	:	OECD Test Guideline 437

Distillates (petroleum), hydrotreated light naphthenic:

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

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species	:	Rabbit
Result	:	Risk of serious damage to eyes.

Distillates (petroleum), hydrotreated light paraffinic:

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

2,6-di-tert-butylphenol:

Species	:	Rabbit
Result	:	No eye irritation

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

Result	:	No eye irritation
Method	:	OECD Test Guideline 437

Distillates (petroleum), hydrotreated light naphthenic:

Species	:	Rabbit

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

Tolytriazole:

Species	:	Rabbit
Result	:	Mild eye irritation
Method	:	OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.

Distillates (petroleum), hydrotreated light paraffinic:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.
GLP	:	yes
Remarks	:	Test results on an analogous product

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

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

GLP : yes

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.

Distillates (petroleum), hydrotreated light paraffinic:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.
GLP	:	yes
Remarks	:	Test results on an analogous product

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

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

Tolytriazole:

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

Germ cell mutagenicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light paraffinic:

Genotoxicity in vitro	:	Test Type: Ames test Test system: TA98 Metabolic activation: with metabolic activation

Method: OECD Test Guideline 471
Result: Conflicting results have been seen in different studies.
Remarks: In analogy to test results for similarly composed products.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: no
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Genotoxicity in vitro : Test Type: Ames test
Test system: TA98
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: equivocal
GLP: No information available.
Remarks: Information given is based on data obtained from similar substances.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473

Result: negative
GLP: no
Remarks: Information given is based on data obtained from similar substances.

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: equivocal
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

Distillates (petroleum), hydrotreated light paraffinic:

Genotoxicity in vitro : Test Type: Ames test
Test system: TA98
Metabolic activation: with metabolic activation
Method: OECD Test Guideline 471
Result: Conflicting results have been seen in different studies.
Remarks: In analogy to test results for similarly composed products.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: no
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Intraperitoneal
Method: OECD Test Guideline 474

Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Genotoxicity in vitro : Test Type: Ames test
Test system: TA98
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: equivocal
GLP: No information available.
Remarks: Information given is based on data obtained from similar substances.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: no
Remarks: Information given is based on data obtained from similar substances.

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: equivocal
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.
Remarks: Test results on an analogous product

Tolytriazole:

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

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

Carcinogenicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light paraffinic:

Species	:	Mouse, female
Application Route	:	Dermal
Exposure time	:	78 weeks
Method	:	OECD Test Guideline 451
Result	:	negative
GLP	:	No information available.
Remarks	:	Test results on an analogous product
Carcinogenicity - Assessment	:	Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

2,6-di-tert-butylphenol:

Remarks : No known significant effects or critical hazards.

Distillates (petroleum), hydrotreated light naphthenic:

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

Distillates (petroleum), hydrotreated light paraffinic:

Species	:	Mouse, female
Application Route	:	Dermal
Exposure time	:	78 weeks
Method	:	OECD Test Guideline 451
Result	:	negative
GLP	:	No information available.
Remarks	:	Test results on an analogous product
Carcinogenicity - Assessment	:	Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

2,6-di-tert-butylphenol:

Remarks : No known significant effects or critical hazards.

Distillates (petroleum), hydrotreated light naphthenic:

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

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

Suspected of damaging fertility or the unborn child.

Components:

Distillates (petroleum), hydrotreated light paraffinic:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 1000 milligram per kilogram
General Toxicity Parent: NOAEL: >= 1,000 mg/kg body weight
Fertility: NOAEL: >= 1,000 mg/kg body weight
Method: OECD Test Guideline 421
Result: No effects on fertility and early embryonic development were detected.
GLP: yes
Remarks: Test results on an analogous product

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat, female
Application Route: Dermal
Dose: 125 - 500 - 2000 milligram per kilogram
General Toxicity Maternal: LOAEL: 125 mg/kg body weight
Teratogenicity: NOAEL: >= 2,000 mg/kg body weight
Developmental Toxicity: NOAEL: >= 2,000 mg/kg body weight
Method: OECD Test Guideline 414
Result: negative
GLP: yes
Remarks: Test results on an analogous product

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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.

Distillates (petroleum), hydrotreated light naphthenic:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 1000 milligram per kilogram
General Toxicity Parent: NOAEL: >= 1,000 mg/kg bw/day
Fertility: NOAEL: >= 1,000 mg/kg bw/day
Early Embryonic Development: NOAEL: >= 1,000 mg/kg bw/day
Method: OECD Test Guideline 421
Result: No effects on fertility and early embryonic development were detected.
GLP: yes
Remarks: Test results on an analogous product

Distillates (petroleum), hydrotreated light paraffinic:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 1000 milligram per kilogram
General Toxicity Parent: NOAEL: >= 1,000 mg/kg body weight
Fertility: NOAEL: >= 1,000 mg/kg body weight
Method: OECD Test Guideline 421
Result: No effects on fertility and early embryonic development were detected.
GLP: yes
Remarks: Test results on an analogous product

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat, female
Application Route: Dermal
Dose: 125 - 500 - 2000 milligram per kilogram
General Toxicity Maternal: LOAEL: 125 mg/kg body weight
Teratogenicity: NOAEL: >= 2,000 mg/kg body weight
Developmental Toxicity: NOAEL: >= 2,000 mg/kg body weight
Method: OECD Test Guideline 414
Result: negative
GLP: yes
Remarks: Test results on an analogous product

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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.

Distillates (petroleum), hydrotreated light naphthenic:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 1000 milligram per kilogram
General Toxicity Parent: NOAEL: >= 1,000 mg/kg bw/day
Fertility: NOAEL: >= 1,000 mg/kg bw/day
Early Embryonic Development: NOAEL: >= 1,000 mg/kg bw/day
Method: OECD Test Guideline 421
Result: No effects on fertility and early embryonic development were detected.
GLP: yes
Remarks: Test results on an analogous product

Tolytriazole:

Effects on fetal development : Species: Rat
Application Route: Oral
Dose: 30 - 90 - 100 milligram per kilogram
General Toxicity Maternal: NOAEL: 90 mg/kg bw/day
Developmental Toxicity: LOAEL: 30 mg/kg bw/day
Embryo-fetal toxicity.: LOAEL: 30 mg/kg body weight
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT-single exposure

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light paraffinic:

Assessment : May cause respiratory irritation.

Distillates (petroleum), hydrotreated light naphthenic:

Assessment : May cause respiratory irritation.

Distillates (petroleum), hydrotreated light paraffinic:

Assessment : May cause respiratory irritation.

Distillates (petroleum), hydrotreated light naphthenic:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

NOAEL : 125 mg/kg
Method : OECD Test Guideline 407

Distillates (petroleum), hydrotreated light paraffinic:

Species : Rat, male
LOAEL : 125 mg/kg
Application Route : Oral
Exposure time : 90 d
Dose : 125 - 500 mg/kg bw/d
Method : OECD Test Guideline 408
GLP : No information available.
Remarks : Subchronic toxicity
Test results on an analogous product

Species : Rat, male and female
NOAEL : > 980 mg/m³
Application Route : Inhalation
Test atmosphere : dust/mist
Exposure time : 28 d
Dose : 50 - 220 - 980 mg/m3
Method : OECD Test Guideline 412
GLP : No information available.
Remarks : Subacute toxicity
Test results on an analogous product

Species : Rabbit, male and female
NOAEL : 1,000 mg/kg
Application Route : Skin contact
Exposure time : 28 d
Dose : 200 - 1000 - 2000 mg/kg bw/d

Method	:	OECD Test Guideline 410
GLP	:	yes
Remarks	:	Subacute toxicity Test results on an analogous product

Distillates (petroleum), hydrotreated light naphthenic:

Species	:	Rat, male
LOAEL	:	125 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Dose	:	125 - 250 mg/kg bw/d
Method	:	OECD Test Guideline 408
GLP	:	No information available.
Remarks	:	Test results on an analogous product

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

NOAEL	:	125 mg/kg
Method	:	OECD Test Guideline 407

Distillates (petroleum), hydrotreated light paraffinic:

Species	:	Rat, male
LOAEL	:	125 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Dose	:	125 - 500 mg/kg bw/d
Method	:	OECD Test Guideline 408
GLP	:	No information available.
Remarks	:	Subchronic toxicity Test results on an analogous product

Species	:	Rat, male and female
NOAEL	:	> 980 mg/m³
Application Route	:	Inhalation
Test atmosphere	:	dust/mist
Exposure time	:	28 d
Dose	:	50 - 220 - 980 mg/m3
Method	:	OECD Test Guideline 412
GLP	:	No information available.
Remarks	:	Subacute toxicity Test results on an analogous product

Species	:	Rabbit, male and female
NOAEL	:	1,000 mg/kg
Application Route	:	Skin contact
Exposure time	:	28 d
Dose	:	200 - 1000 - 2000 mg/kg bw/d
Method	:	OECD Test Guideline 410
GLP	:	yes

Remarks : Subacute toxicity
Test results on an analogous product

Distillates (petroleum), hydrotreated light naphthenic:

Species	:	Rat, male
LOAEL	:	125 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Dose	:	125 - 250 mg/kg bw/d
Method	:	OECD Test Guideline 408
GLP	:	No information available.
Remarks	:	Test results on an analogous product

Tolytriazole:

Species	:	Rat
NOAEL	:	150 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Remarks	:	Subacute toxicity

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light paraffinic:

May be fatal if swallowed and enters airways.

Distillates (petroleum), hydrotreated light naphthenic:

May be fatal if swallowed and enters airways.

Distillates (petroleum), hydrotreated light paraffinic:

May be fatal if swallowed and enters airways.

Distillates (petroleum), hydrotreated light naphthenic:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 4.4 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 75 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 240 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.4 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 380 mg/l Exposure time: 16 h Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated light paraffinic:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: water extractable fraction
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Analytical monitoring: no Method: OECD Test Guideline 202 GLP: no Remarks: water extractable fraction
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: no

Method: OECD Test Guideline 201
GLP: no
Remarks: water extractable fraction

NOEC (Pseudokirchneriella subcapitata (microalgae)): >= 100 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: water extractable fraction

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 10 mg/l
End point: Reproduction
Exposure time: 21 d
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: water extractable fraction

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 toxicity) : 1

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

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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.

Distillates (petroleum), hydrotreated light naphthenic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Remarks: water extractable fraction

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: water extractable fraction

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: No information available.
Method: OECD Test Guideline 201
GLP: No information available.
Remarks: water extractable fraction
Test results on an analogous product

NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: No information available.
Method: OECD Test Guideline 201
GLP: No information available.
Remarks: water extractable fraction
Test results on an analogous product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 10 mg/l
End point: Reproduction
Exposure time: 21 d
Analytical monitoring: No information available.
Method: OECD Test Guideline 211
GLP: yes
Remarks: water extractable fraction

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.4 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 75 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 240 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chron- : NOEC (Daphnia magna (Water flea)): 0.4 mg/l
Exposure time: 21 d

ic toxicity)

Toxicity to microorganisms : EC50 (Pseudomonas putida): 380 mg/l
Exposure time: 16 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated light paraffinic:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: water extractable fraction

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: no
Remarks: water extractable fraction

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: water extractable fraction

NOEC (Pseudokirchneriella subcapitata (microalgae)): >= 100 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: water extractable fraction

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 10 mg/l
End point: Reproduction
Exposure time: 21 d
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: water extractable fraction

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 toxicity)	:	1
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

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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.

Distillates (petroleum), hydrotreated light naphthenic:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: water extractable fraction
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: water extractable fraction
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: No information available. Method: OECD Test Guideline 201 GLP: No information available. Remarks: water extractable fraction Test results on an analogous product NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l

End point: Growth rate
Exposure time: 72 h
Analytical monitoring: No information available.
Method: OECD Test Guideline 201
GLP: No information available.
Remarks: water extractable fraction
Test results on an analogous product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 10 mg/l
End point: Reproduction
Exposure time: 21 d
Analytical monitoring: No information available.
Method: OECD Test Guideline 211
GLP: yes
Remarks: water extractable fraction

Tolytriazole:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 55 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 55 mg/l
Exposure time: 48 h
Remarks: Fresh water

EC50 (Daphnia galeata (Water flea)): 8.58 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 62 mg/l
Exposure time: 72 h
Remarks: Fresh water

NOEC (Skeletonema costatum (marine diatom)): 30 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 18.4 mg/l
Exposure time: 21 Days

EC10 (Daphnia galeata (Water flea)): 0.4 mg/l
Exposure time: 21 Days
Method: OECD Test Guideline 211

Persistence and degradability

Components:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Biodegradability : Result: Not readily biodegradable.

Distillates (petroleum), hydrotreated light paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

2,6-di-tert-butylphenol:

Biodegradability : Result: Not readily biodegradable.

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Biodegradability : Result: Not readily biodegradable.

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate):

Biodegradability : Result: Not readily biodegradable.

Distillates (petroleum), hydrotreated light paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

2,6-di-tert-butylphenol:

Biodegradability : Result: Not readily biodegradable.

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Distillates (petroleum), hydrotreated light naphthenic:

Biodegradability : Result: Not readily biodegradable.

Tolytriazole:

Biodegradability : Result: Not readily biodegradable.

Bioaccumulative potential

Components:

2,6-di-tert-butylphenol:

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

2,6-di-tert-butylphenol:

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

Tolytriazole:

Bioaccumulation : Bioconcentration factor (BCF): 2.4

Partition coefficient: n-octanol/water : log Pow: 1.08

Mobility in soil

Components:

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine:

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

Tolytriazole:

Distribution among environmental compartments : Koc: 110

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, 2-ETHYLHEXYL-ZINCDITHIOPHOSPHATE)
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, 2-ETHYLHEXYL-ZINCDITHIOPHOSPHATE)
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, 2-ETHYLHEXYL-ZINCDITHIOPHOSPHATE)
Class	:	9
Packing group	:	III
Labels	:	9
	:	
ERG Code	:	171
Marine pollutant	:	yes
		

Hazard and Handling Notes.

Environmentally hazardous substance., Irritating to skin., Risk of serious damage to eyes, 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
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	4259-15-8	>= 50 - < 70 %

US State Regulations

Massachusetts Right To Know

Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	10 - 20
2,6-di-tert-butylphenol	128-39-2	5 - 10
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	1 - 5
Distillates (petroleum), solvent-refined light naphthenic	64741-97-5	0.1 - 1

Pennsylvania Right To Know

zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	4259-15-8	>= 50 - < 70
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	>= 10 - < 20
2,6-di-tert-butylphenol	128-39-2	>= 5 - < 10
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	70024-69-0	>= 5 - < 10
Proprietary Component	Trade Secret	>= 5 - < 10
tridodecyl trithiophosphite	1656-63-9	>= 1 - < 5
Proprietary Non-Hazardous	Not Assigned	>= 1 - < 5
9-Octadecenoic acid (Z)-, reaction products with 3-(dodecenyl)dihydro-2,5-furandione and triethylenetetramine	68478-81-9	>= 1 - < 5
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	>= 1 - < 5

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

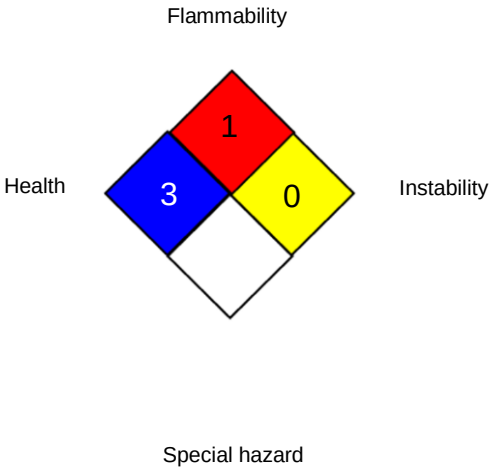
No substances are subject to a Significant New Use Rule.

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

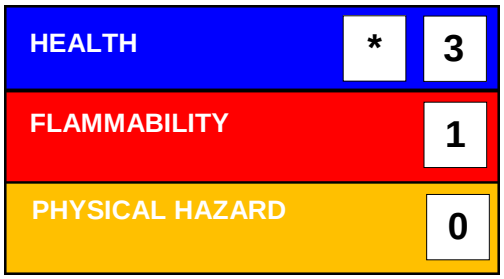
SECTION 16. OTHER INFORMATION

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)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
OSHA Z-1 / 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 Sub-

stance; 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 : 03/29/2021

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.