SAFETY DATA SHEET

ADDITIN RC 9420(M 94.005)

Version	Revision Date:	SDS Number:	Date of last issue: 07/27/2022
1.1	03/16/2023	203000020208	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ADDITIN RC 9420(M 94.005)

Product code : 000000000062540823

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 : Lubricant assistants

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

Skin sensitization : Category 1

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

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.

Precautionary Statements :

Prevention:

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

Response:

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage:

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

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Polysulfides, di-tert-Bu	68937-96-2	>= 30 - < 50
Distillates (petroleum), hydrotreated	64742-53-6	>= 10 - < 20

light naphthenic		
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	>= 10 - < 20
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	>= 5 - < 10
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	>= 1 - < 5
Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol	56748-97-1	>= 1 - < 5
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4	>= 1 - < 5
(tetrapropenyl)succinic acid	27859-58-1	>= 1 - < 5
benzotriazole	95-14-7	>= 1 - < 5

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

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

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

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

In case of eye contact : Get medical attention immediately.
In case of contact, flush eyes with plenty of water for at least 30 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.
Remove contact lenses, if present and easy to do. Continue rinsing.
Chemical burns must be treated promptly by a physician.

If swallowed : Get medical attention immediately.
Rinse mouth with water.

Do not induce vomiting unless directed to do by medical personnel.
Aspiration hazard if swallowed - can enter lungs and cause damage.
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	:	May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Ingestion and/or vomiting may cause aspiration into the lungs resulting in chemical pneumonitis (inflammation of the lungs). Eye: Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage. Skin: Causes irritation with symptoms of reddening, itching, and swelling. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Effects	:	May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon monoxide Carbon dioxide (CO2) Nitrogen oxides (NOx) phosphorus oxide (P_2O_5)

Sulfur oxides

Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protection equipment. Do not touch or walk through spilled material. Evacuate unnecessary personnel. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Do not breathe vapors, aerosols.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal. Stop leak if safe to do so. Move containers from spill area. Wash spillages into an effluent treatment plant or proceed as follows. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Dispose of wastes in an approved waste disposal facility. Do not allow into the sewerage system, surface waters or groundwater or into the soil. Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Remove contaminated clothing and protective equipment be-

fore entering eating areas.
Workers should wash hands and face before eating, drinking and smoking.
Put on appropriate personal protection equipment.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Avoid inhalation, ingestion and contact with skin and eyes.
Persons with a history of skin sensitization to this product should not be employed in any process in which this product is used.
Use only with adequate ventilation/personal protection.

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

Further information on storage stability : Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	OSHA Z-1
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	OSHA Z-1
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4	TWA (Inhalable particu-	5 mg/m3	ACGIH

		late matter)		
		TWA (Mist)	5 mg/m3	OSHA Z-1
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH
		TWA (Mist)	5 mg/m3	OSHA Z-1

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

Personal protective equipment

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
NIOSH approved, air-purifying organic vapor respirator.

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

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations

Eye protection : Tightly fitting safety goggles

Skin and body protection : Wear suitable protective clothing.
Chemical resistant apron
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

Appearance : No data available

Physical state	:	liquid (68 °F / 20 °C)
Color	:	yellow
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 203 °F / > 95 °C Method: ISO 2719
Evaporation rate	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	ca. 1 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	:	10.29 mm2/s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
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.

Acute toxicity

Not classified based on available information.

Product:

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

Components:

Polysulfides, di-tert-Bu:

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

toxicity

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

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

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Acute oral toxicity : LD50 (Rat): > 300 mg/kg

Acute dermal toxicity : LD50: 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Distillates (petroleum), solvent-refined heavy 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

(tetrapropenyl)succinic acid:

Acute oral toxicity : LD50 (Rat, female): 2,100 mg/kg
Method: OECD Test Guideline 401
GLP: yes

benzotriazole:

Acute oral toxicity : LD50 (Rat, male and female): ca. 500 mg/kg
Method: OECD Test Guideline 423
GLP: yes

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

Skin corrosion/irritation

Causes skin irritation.

Components:

Polysulfides, di-tert-Bu:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation
GLP : yes

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

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

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

Distillates (petroleum), hydrotreated light paraffinic:

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Species	:	reconstructed human epidermis (RhE)
Assessment	:	Irritating to skin.
Method	:	Regulation (EC) No. 440/2008, Annex, B.46
Result	:	Skin irritation

Distillates (petroleum), solvent-refined heavy naphthenic:

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

(tetrapropenyl)succinic acid:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	Irritating to skin.
GLP	:	yes

benzotriazole:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	No information available.

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Polysulfides, di-tert-Bu:

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

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

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

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

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Species	:	Bovine cornea
Result	:	Irreversible effects on the eye

Assessment	:	Causes severe burns.
Method	:	Regulation (EC) No. 440/2008, Annex, B.47

Distillates (petroleum), solvent-refined heavy naphthenic:

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

(tetrapropenyl)succinic acid:

Species	:	Rabbit
Result	:	Risk of serious damage to eyes.
Exposure time	:	21 d
GLP	:	No information available.

benzotriazole:

Species	:	Rabbit
Result	:	Irritating to eyes.
Method	:	OECD Test Guideline 405
GLP	:	No information available.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Polysulfides, di-tert-Bu:

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

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

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.

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.

Distillates (petroleum), solvent-refined heavy 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
Remarks	:	Test results on an analogous product

(tetrapropenyl)succinic acid:

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

benzotriazole:

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

Germ cell mutagenicity

Not classified based on available information.

Components:

Polysulfides, di-tert-Bu:

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: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

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

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Cell type: Bone marrow
Application Route: Oral
Dose: 2000 mg/kg bw
Method: OECD Test Guideline 474
Result: negative
GLP: yes

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

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

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)
Test system: TA1535
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Distillates (petroleum), solvent-refined heavy 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

(tetrapropenyl)succinic acid:

Genotoxicity in vitro : 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 490
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

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

benzotriazole:

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: 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

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

Carcinogenicity

Not classified based on available information.

Components:

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)

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Distillates (petroleum), solvent-refined heavy naphthenic:

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

benzotriazole:

Species	:	Rat, male and female
Application Route	:	Oral
Exposure time	:	78 weeks
Dose	:	6700 - 12100 ppm
NOAEL	:	12,100 ppm
Method	:	OECD Test Guideline 451
Result	:	negative
GLP	:	No information available.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

Polysulfides, di-tert-Bu:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
Dose: 25 - 75 - 150 milligram per kilogram
General Toxicity Parent: NOAEL: 75 mg/kg bw/day
Fertility: NOAEL: 150 mg/kg bw/day
Early Embryonic Development: NOAEL: 75 mg/kg bw/day
Method: OECD Test Guideline 421
Result: Animal testing did not show any effects on fertility.
GLP: yes

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

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

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral
General Toxicity Parent: NOAEL: 300 mg/kg body weight

Effects on fetal development : Species: Rat
Application Route: Oral
General Toxicity Maternal: NOAEL: 300 mg/kg body weight

Distillates (petroleum), solvent-refined heavy 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

(tetrapropenyl)succinic acid:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 16 - 40 - 100 milligram per kilogram
General Toxicity Parent: NOAEL: > 100 mg/kg body weight
Early Embryonic Development: NOAEL: > 100 mg/kg body weight
Method: OECD Test Guideline 421
Result: negative
GLP: yes

benzotriazole:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
Dose: 12.5 - 50 - 200 milligram per kilogram
Fertility: NOAEL: >= 200 mg/kg body weight
Early Embryonic Development: NOAEL: >= 200 mg/kg body weight
Method: OECD Test Guideline 421
Result: No effects on fertility and early embryonic development were detected.
GLP: yes

Effects on fetal development : Test Type: Pre-natal
Species: Rat, female
Application Route: Oral
Dose: 36 - 120 - 330 milligram per kilogram
General Toxicity Maternal: NOAEL: 36 mg/kg body weight
Developmental Toxicity: NOAEL: 120 mg/kg body weight
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

STOT-single exposure

May cause respiratory irritation.

Components:

Distillates (petroleum), hydrotreated light naphthenic:

Assessment : May cause respiratory irritation.

Distillates (petroleum), hydrotreated light paraffinic:

Assessment : May cause respiratory irritation.

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Assessment : May cause respiratory irritation.

Distillates (petroleum), solvent-refined heavy naphthenic:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Polysulfides, di-tert-Bu:

Species	:	Rat, male and female
NOAEL	:	100 mg/kg
LOAEL	:	300 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	33 - 100 - 300 mg/kg bw/day
Method	:	OECD Test Guideline 407
GLP	:	yes
Remarks	:	Subacute toxicity

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 - 500 mg/kg bw/d

Method	:	OECD Test Guideline 408
GLP	:	No information available.
Remarks	:	Test results on an analogous product

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Species	:	Rat
NOAEL	:	300 mg/kg
Application Route	:	Oral

Distillates (petroleum), solvent-refined heavy naphthenic:

Species	:	Rat, male
LOAEL	:	125 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
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

(tetrapropenyl)succinic acid:

Species	:	Rat, male and female
NOAEL	:	100 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	16 - 40 - 100 mg/kg bw/day
Method	:	OECD Test Guideline 407
GLP	:	yes
Remarks	:	Subacute toxicity

benzotriazole:

Species	:	Rat, male and female
LOAEL	:	6700 ppm
Application Route	:	Oral
Exposure time	:	78 Weeks
Number of exposures	:	daily
Dose	:	6700 - 12100 ppm
Method	:	OECD Test Guideline 451
GLP	:	No information available.
Remarks	:	Chronic toxicity

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

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.

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Polysulfides, di-tert-Bu:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 63 mg/l
Exposure time: 48 h
Test Type: static test
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
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: water extractable fraction

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

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

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

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
Test results on an analogous product

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
Test results on an analogous product

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
Test results on an analogous product

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 26.3 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

NOEC (Oncorhynchus mykiss (rainbow trout)): 17.3 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Lowest Observed Effect Concentration (Oncorhynchus mykiss (rainbow trout)): 39.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 84.91 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 203

NOEC (Daphnia magna (Water flea)): 50 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 203

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 59.6 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 59.6 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (adapted and activated sludge micro-organism): 1,000 mg/l
Exposure time: 3 h
Test Type: Cell multiplication inhibition test
Method: OECD Test Guideline 209

Distillates (petroleum), solvent-refined heavy 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
Test results on an analogous product

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
Test results on an analogous product

Toxicity to algae/aquatic : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100

plants		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 Test results on an analogous product

(tetrapropenyl)succinic acid:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes Remarks: Fresh water
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: Fresh water
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (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: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: Fresh water
nominal concentration

benzotriazole:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 180 mg/l
Exposure time: 96 h
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 15.8 mg/l
End point: Immobilization
Exposure time: 48 h
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: No information available.

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): 75 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (microalgae)): 10 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: yes

EC10 (Desmodesmus subspicatus (green algae)): 1.18 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: No information available.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10 (Daphnia galeata (Water flea)): 0.97 mg/l End point: Reproduction Exposure time: 21 Days Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: No information available.
Toxicity to microorganisms	:	EC50 (activated sludge): 940 mg/l End point: Respiration inhibition Exposure time: 3 h Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes

Persistence and degradability

Components:

Polysulfides, di-tert-Bu:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 13 % Exposure time: 28 d Method: OECD Test Guideline 301B

Distillates (petroleum), hydrotreated light naphthenic:

Biodegradability	:	Result: Not readily biodegradable.

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

Distillates (petroleum), hydrotreated light paraffinic:

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

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Biodegradability	:	Result: Not readily biodegradable.

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Biodegradability	:	Biodegradation: 0 %

Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Distillates (petroleum), solvent-refined heavy naphthenic:

Biodegradability : Result: Not readily biodegradable.

(tetrapropenyl)succinic acid:

Biodegradability : aerobic
Inoculum: activated sludge, adapted
Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: 18.3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

benzotriazole:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

Bioaccumulative potential

Components:

Polysulfides, di-tert-Bu:

Partition coefficient: n-octanol/water : log Pow: 5.6 (68 °F / 20 °C)
Method: OECD Test Guideline 117
GLP: yes

Butanedioic acid, 2-(tetrapropenyl)-, ester with 1,2-propanediol:

Partition coefficient: n-octanol/water : log Pow: 1.84 (77 °F / 25 °C)
Method: OECD Test Guideline 117
GLP: yes

(tetrapropenyl)succinic acid:

Partition coefficient: n-octanol/water : log Pow: 4.69
Method: OECD Test Guideline 107
GLP: yes

benzotriazole:

Bioaccumulation : Bioconcentration factor (BCF): 4.14

Partition coefficient: n-octanol/water	:	log Pow: 1.34

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not regulated as a dangerous good

Hazard and Handling Notes.

Not dangerous cargo, Risk of serious damage to eyes, Irritating to skin., Keep separated from foodstuffs

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
Aspiration hazard
Skin corrosion or irritation
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	10 - 20
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	5 - 10
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	1 - 5
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4	1 - 5
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	> 1
benzotriazole	95-14-7	>= 1

Pennsylvania Right To Know

Polysulfides, di-tert-Bu	68937-96-2	30 - 50
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	10 - 20
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	10 - 20
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	5 - 10
2,5-bis(tert-nonyldithio)-1,3,4-thiadiazole	89347-09-1	> 1
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0	1 - 5
Distillates (petroleum), solvent-refined heavy naphthenic	64741-96-4	1 - 5
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	> 1

diphenylamine	122-39-4	< 0.1

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

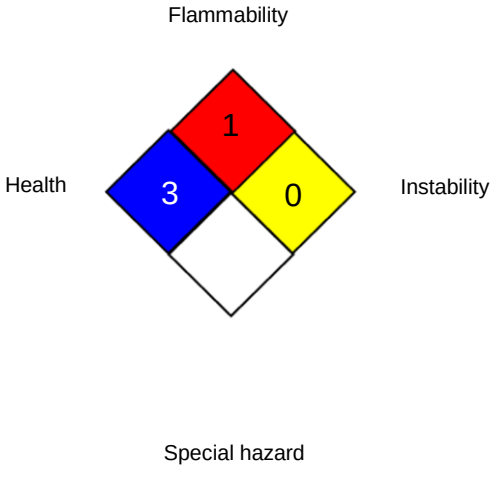
No substances are subject to a Significant New Use Rule.

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

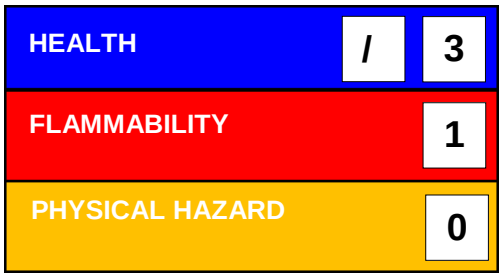
SECTION 16. OTHER INFORMATION

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 In-

stitute 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 : 03/16/2023

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.