SAFETY DATA SHEET

ADDITIN M 97.003

Version	Revision Date:	SDS Number:	Date of last issue: 04/21/2022
2.0	08/16/2022	203000007420	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ADDITIN M 97.003

Product code : 000000000057471656

Manufacturer or supplier's details

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

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

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

Recommended use of the chemical and restrictions on use

Recommended use : Additive for lubricants

SECTION 2. HAZARDS IDENTIFICATION

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

Skin irritation : Category 2

Serious eye damage : Category 1

Skin sensitization : Category 1

Reproductive toxicity : Category 1B

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Causes skin irritation.

May cause an allergic skin reaction.
Causes serious eye damage.
May damage fertility.

Precautionary Statements :

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing mist or vapors.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

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

Storage:

Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Proprietary fatty acid compound	Trade secret	>= 50 - < 70
Phosphonic acid, dibutyl ester	1809-19-4	>= 5 - < 10
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	>= 5 - < 10
Aliphatic dibasic acid, glycol ester	P-88-2640	>= 1 - < 5
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	>= 1 - < 5

Proprietary phosphorus compound	Trade Secret	>= 1 - < 5
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	>= 1 - < 5
1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-ar-methyl-	94270-86-7	>= 1 - < 5
Proprietary Ingredient	Trade Secret	>= 1 - < 5
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	>= 1 - < 5

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

SECTION 4. FIRST AID MEASURES

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

If inhaled : Get medical attention if symptoms occur.
If not breathing, give artificial respiration.

In case of skin contact : Wash off with soap and plenty of water.
Remove contaminated clothing and shoes.
Continue to rinse for at least 20 minutes.
In the case of skin irritation or allergic reactions see a physician.
Wash contaminated clothing before re-use.

In case of eye contact : Get medical attention immediately.
In case of contact, immediately flush eyes with plenty of water for at least 30 minutes.
Keep eye wide open while rinsing.
Remove contact lenses, if present and easy to do. Continue rinsing.

If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Get medical attention if symptoms occur.

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.
May cause sensitization by skin contact.
Once sensitized, an allergic skin reaction may occur with reddening, swelling, and rash when subsequently exposed to very low levels.
Adverse effects from repeated exposure may include

Effects on fertility.

Effects	:	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May damage fertility.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection and use the recommended protective clothing

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	In case of fire, use water spray (fog), foam or dry chemical.
Unsuitable extinguishing media	:	None known.
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 Nitrogen oxides (NOx) phosphorus oxide (P_2O_5)
Further information	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	No action shall be taken involving any personal risk or without suitable training. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapors or spray mist. 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. Keep people away from and upwind of spill/leak. Wash spillages into an effluent treatment plant or proceed as follows. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Dispose of wastes in an approved waste disposal facility. Contaminated absorbent material may pose the same hazard as the spilled product. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid exposure during pregnancy. 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. 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. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Conditions for safe storage	:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep containers sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate container to avoid environmental contamination.

Empty containers retain residue and can be dangerous.
Do not reuse container.

Further information on storage stability : No decomposition if stored and applied as directed.

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

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.

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. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Wear work clothing including long pants and long-sleeve shirts.

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	:	brown
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	280 °F / 138 °C Method: closed 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	:	0.979 g/cm3 (68 °F / 20 °C)
Solubility(ies)		
Water solubility	:	slightly soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-	:	No data available

octanol/water

Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	405.4 mm2/s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Extremes of temperature and direct sunlight.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Information on likely routes of exposure

Inhalation
Ingestion
Eye contact
Skin contact

Acute toxicity

Not classified based on available information.

Product:

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

Acute inhalation toxicity : Acute toxicity estimate: 78.57 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

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

Components:

Phosphonic acid, dibutyl ester:

Acute oral toxicity : LD50 (Rat): 3,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 22 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist

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

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

Aliphatic dibasic acid, glycol ester:

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

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

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
GLP: no

Acute dermal toxicity : LD50 (Rat): > 10,000 mg/kg
GLP: no

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

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

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

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

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: no

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

Skin corrosion/irritation

Causes skin irritation.

Components:

Proprietary fatty acid compound:

Result : Causes mild skin and eye irritation

Phosphonic acid, dibutyl ester:

Species : Rabbit
Result : Irritating to skin.

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

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

Aliphatic dibasic acid, glycol ester:

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

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

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

Proprietary phosphorus compound:

Result : Skin irritation

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

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

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

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Result	:	Irreversible effects on the eye

Components:

Proprietary fatty acid compound:

Species	:	Rabbit
Result	:	Severe eye irritation
Assessment	:	Irritating to eyes.

Phosphonic acid, dibutyl ester:

Species	:	Rabbit
Result	:	Irritating to eyes.

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

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

Aliphatic dibasic acid, glycol ester:

Species	:	Bovine cornea
Result	:	Irreversible effects on the eye
Assessment	:	Causes severe burns.
Method	:	Regulation (EC) No. 440/2008, Annex, B.47

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

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

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

Species : Rabbit
Result : No eye irritation

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

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.

Aliphatic dibasic acid, glycol ester:

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

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

Routes of exposure	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Did not cause sensitization on laboratory animals.
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

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

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

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Germ cell mutagenicity

Not classified based on available information.

Components:

Phosphonic acid, dibutyl ester:

Genotoxicity in vitro	:	Test system: Bacteria Method: OECD Test Guideline 471 Result: negative Test system: mouse lymphoma cells

Result: negative

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

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

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

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

Aliphatic dibasic acid, glycol ester:

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

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

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
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: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
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

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

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

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Test results on an analogous product

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

Carcinogenicity

Not classified based on available information.

Components:

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

Species	:	Rat, male
Application Route	:	Oral
Exposure time	:	18 month(s)
NOAEL	:	12.7 mg/kg bw/day

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

May damage fertility.

Components:

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

Aliphatic dibasic acid, glycol ester:

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

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

Effects on fertility : Species: Rat, male
Application Route: Oral
General Toxicity Parent: NOAEL: 12.5 mg/kg body weight
General Toxicity F1: NOAEL: 12.5 mg/kg body weight
Symptoms: Testicular damage in animals.
Method: OECD Test Guideline 421
GLP: yes

Species: Rat, female
Application Route: Oral
General Toxicity F1: NOAEL: 50 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

Effects on fetal development : Species: Rat
Application Route: Oral
Dose: 200 milligram per kilogram
General Toxicity Maternal: NOAEL: 50 mg/kg body weight
Embryo-fetal toxicity.: 50 mg/kg body weight
Method: OECD Test Guideline 421

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, 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 develop-

ment were detected.
GLP: yes
Remarks: Test results on an analogous product

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

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

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

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

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

STOT-single exposure

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light naphthenic:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Aliphatic dibasic acid, glycol ester:

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

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

Species	:	Rat, male
NOAEL	:	12.7 mg/kg
Application Route	:	Oral
Exposure time	:	1.5 yr
Number of exposures	:	daily
GLP	:	no
Remarks	:	Chronic 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

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

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

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated light naphthenic:

May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Phosphonic acid, dibutyl ester:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 63.4 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	NOEC (Daphnia magna (Water flea)): 4.1 mg/l Exposure time: 21 Days Method: OECD Test Guideline 211
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (microalgae)): 3 mg/l Exposure time: 72 h EC10 (Pseudokirchneriella subcapitata (microalgae)): 4.1 mg/l Exposure time: 72 h

EC50 (Pseudokirchneriella subcapitata (microalgae)): 8.9 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 4.1 mg/l
Exposure time: 21 Days

EC50 (Daphnia magna (Water flea)): 18 mg/l
Exposure time: 21 Days

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

Aliphatic dibasic acid, glycol ester:

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 : EC50 (Daphnia magna (Water flea)): 84.91 mg/l

aquatic invertebrates

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

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

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 5 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Dosage caused no mortality

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 4.8 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 5 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (microalgae)): 1.3 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.34 mg/l Exposure time: 21 d Method: OECD Test Guideline 202 GLP: yes
Toxicity to microorganisms	:	EC50 (activated sludge): > 10,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 GLP: no

Ecotoxicology Assessment

Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

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	:	NOELR (Daphnia magna (Water flea)): 10 mg/l

aquatic invertebrates (Chronic toxicity)	End point: Reproduction Exposure time: 21 d Analytical monitoring: No information available. Method: OECD Test Guideline 211 GLP: yes Remarks: water extractable fraction

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

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 1.3 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC10 (Daphnia magna (Water flea)): 1.93 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 0.976 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Desmodesmus subspicatus (green algae)): 0.658 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Bacteria): 13 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: no
Remarks: Fresh water
nominal concentration

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 51 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water
nominal concentration

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: Fresh water
nominal concentration

NOEC (Desmodesmus subspicatus (green algae)): > 10 mg/l
End point: Growth rate

Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: Fresh water
nominal concentration

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

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

Persistence and degradability

Components:

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

Aliphatic dibasic acid, glycol ester:

Biodegradability : Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

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

Biodegradability : Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d

Method: OECD Test Guideline 301C
GLP: yes

Distillates (petroleum), hydrotreated light naphthenic:

Biodegradability : Result: Not readily biodegradable.

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Bioaccumulative potential

Components:

Aliphatic dibasic acid, glycol ester:

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

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

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 840
Method: OECD Test Guideline 305
GLP: yes

Partition coefficient: n-octanol/water : log Pow: 6.25 (68 °F / 20 °C)
Method: OECD Test Guideline 117
GLP: no

Proprietary Ingredient:

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

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

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

Mobility in soil

No data available

Other adverse effects

Components:

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

Results of PBT and vPvB assessment	:	This substance is not considered to be very persistent and very bioaccumulating (vPvB). This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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
Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
Reproductive toxicity
Skin corrosion or irritation
Serious eye damage or eye irritation

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

US State Regulations

Massachusetts Right To Know

Phosphonic acid, dibutyl ester	1809-19-4	5 - 10
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	1 - 5
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	> 1
formaldehyde	50-00-0	< 0.001

Pennsylvania Right To Know

Proprietary fatty acid compound	Trade secret	50 - 70
Proprietary sulfur hydrocarbon	Trade Secret	> 1
Phosphonic acid, dibutyl ester	1809-19-4	5 - 10
Proprietary non-hazardous ingredient	Trade Secret	> 1

Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates	80939-62-4	5 - 10
Aliphatic dibasic acid, glycol ester	P-88-2640	> 1
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	1 - 5
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	1 - 5
1-Butanol	71-36-3	< 1
diphenylamine	122-39-4	< 0.1

California Prop. 65

WARNING: This product can expose you to chemicals including formaldehyde, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

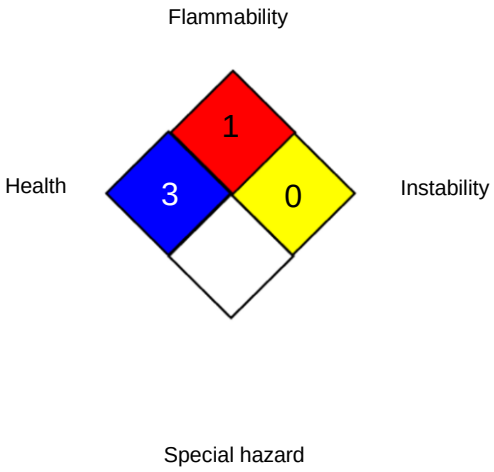
No substances are subject to a Significant New Use Rule.

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

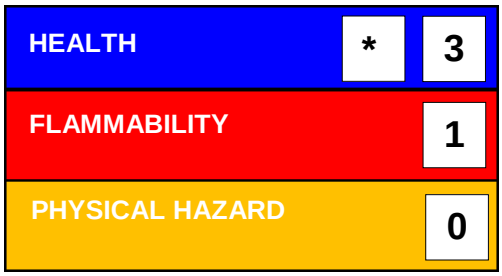
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



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

Full text of other abbreviations

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

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

Revision Date : 08/16/2022

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.