Substance key: 000000633134	Revision Date: 03/06/2021
Version : 2 - 2 / USA	Date of printing :09/02/2021

SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Corporation 500 East Morehead Street Charlotte, NC, 28202 Telephone No.: +1 704 331 7000 **Information of the substance/preparation:** Product Stewardship, +1-704-331-7710 **Emergency tel. number:** +1 800-424-9300 CHEMTREC

Trade name:	**AddWorks LXR 314**
Material number:	299502
Primary product use:	Class of additive: Light stabilizer
Chemical family:	mixture of light stabilizers and UV absorbers

SECTION 2. HAZARDS IDENTIFICATION

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

Flammable liquids	:	Category 3
Skin irritation	:	Category 2
Skin sensitisation	:	Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements :
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

Precautionary statements :

Prevention:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 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)
1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine	106917-31-1	50 - 70
2-methoxy-1-methylethyl acetate	108-65-6	10 - 20
1-Methoxy-2-propanol	107-98-2	5 - 10

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Get medical advice/ attention if you feel unwell.

If inhaled : Move the victim to fresh air.
Give oxygen or artificial respiration if needed.
Get immediate medical advice/ attention.
Never give anything by mouth to an unconscious person.

In case of skin contact : Remove contaminated clothing. Flush all affected areas with large amounts of water for at least 15 minutes. Seek medical

attention immediately.

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if irritation develops and persists.
If swallowed	:	If conscious, give the victim plenty of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Water spray Carbon dioxide (CO2) Foam Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	None known.
Further information	:	Wear suitable protective equipment.
Special protective equipment for firefighters	:	Wear personal protective equipment. In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wear suitable protective equipment.
Environmental precautions	:	The product should not be allowed to enter drains, water courses or the soil.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Observe the general rules of industrial fire protection

Advice on safe handling : Wear suitable protective equipment.
Keep container closed when not in use.
Do not breathe vapour.
Avoid contact with skin and eyes.

Further information on storage conditions : Store in original container.
Keep container tightly closed.
Store in a cool, dry, well-ventilated area.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-methoxy-1-methylethyl acetate	108-65-6	TWA	50 ppm	US WEEL
1-Methoxy-2-propanol	107-98-2	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
		ST	150 ppm 540 mg/m3	NIOSH REL
		TWA	100 ppm 360 mg/m3	NIOSH REL
		TWA	100 ppm 360 mg/m3	OSHA P0
		STEL	150 ppm 540 mg/m3	OSHA P0

Engineering measures : A system of local and/or general exhaust is recommended where employee exposures are at or above Occupational Exposure Limits (OEL).

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other

circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Remarks : Nitrile rubber gloves. Minimum breakthrough time (glove): not determined Minimum thickness (glove): not determined Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Butyl Rubber, PVC Or Neoprene.

Eye protection : Safety glasses with side-shields

Skin and body protection : Impervious protective clothing and chemically resistant footwear should be worn to minimize contact.

Protective measures : Observe the usual precautions for handling chemicals.

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat, drink or smoke.
Use protective skin cream before handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : yellow

Odour : solvent-like

Odour Threshold : not determined

pH : approximately 7.9 (72 °F / 22 °C)
Concentration: 1 %
(aqueous suspension)

Melting point : Not applicable

Boiling point : 248 °F / 120 °C
Method: OECD Test Guideline 103
Data relate to solvent

Flash point : 122.9 °F / 50.5 °C

Method: ABEL (DIN EN ISO 13736) (closed cup)

Evaporation rate : not tested.

Flammability (solid, gas) : Not applicable

Self-ignition	:	Method: Expert judgement The substance or mixture is not classified as pyrophoric.
Burning number	:	Not applicable
Upper explosion limit / upper flammability limit	:	not tested.
Lower explosion limit / Lower flammability limit	:	not tested.
Vapour pressure	:	not tested.
Relative vapour density	:	not tested.
Density	:	1.0 g/cm3 (104 °F / 40 °C) Method: DIN EN ISO 15212-1
Solubility(ies)		
Water solubility	:	miscible
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	734 °F / 390 °C Method: DIN 51794
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, dynamic	:	114.5 mPa.s (104 °F / 40 °C)
Viscosity, kinematic	:	114.3 mm2/s (104 °F / 40 °C) Method: ISO 3104
Explosive properties	:	Not explosive Method: Expert judgement
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Method: Expert judgement The product does not contain organic peroxide-groups which result from either the manufacturing process or from added ingredients.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	See section 10.3. "Possibility of hazardous reactions"
Chemical stability	:	Stable under normal conditions.

Possibility of hazardous reactions	:	The substance or mixture does not emit flammable gases in contact with water. Not corrosive to metals
Conditions to avoid	:	Keep away from heat and sources of ignition.
Incompatible materials	:	not known
Hazardous decomposition products	:	no data available

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: 4,669 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 200 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Acute oral toxicity	:	LD50 (Rat, male and female): > 3,000 mg/kg Method: OECD Test Guideline 401 GLP: no
Acute dermal toxicity	:	Remarks: Not observed

2-methoxy-1-methylethyl acetate:

Acute oral toxicity	:	LD50 (Rat, male and female): 6,190 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity	:	LC50 (Mouse, male): 10.8 mg/l, 2000 ppm Exposure time: 3 h Test atmosphere: dust/mist Method: Other GLP: yes Assessment: The substance or mixture has no acute inhalation 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

1-Methoxy-2-propanol:

Acute oral toxicity : LD50 (Rat, male and female): 4,016 mg/kg
Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 26 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: Directive 67/548/EEC, Annex V, B.3.
GLP: yes

Skin corrosion/irritation

Product:

Result: Irritating to skin.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: no

2-methoxy-1-methylethyl acetate:

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

1-Methoxy-2-propanol:

Species: Rabbit
Exposure time: 4 h
Method: Directive 67/548/EEC, Annex V, B.4.
Result: No skin irritation
GLP: yes

Serious eye damage/eye irritation

Product:

Result: No eye irritation

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Species: Rabbit
Result: No eye irritation
Exposure time: 72 h
Method: OECD Test Guideline 405
GLP: no

1-Methoxy-2-propanol:

Species: Rabbit
Result: No eye irritation
Method: Directive 67/548/EEC, Annex V, B.5.
GLP: yes

Respiratory or skin sensitisation

Product:

Result: May cause sensitisation by skin contact.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

2-methoxy-1-methylethyl acetate:

Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
GLP: yes

1-Methoxy-2-propanol:

Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Method: Directive 67/548/EEC, Annex V, B.6.
Result: Not a skin sensitizer.
GLP: yes

Germ cell mutagenicity

Product:

Germ cell mutagenicity - Assessment : No information available.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

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

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Strain: NMRI
Application Route: Oral
Dose: 2000 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

2-methoxy-1-methylethyl acetate:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 100 - 50000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: DNA damage and repair assay
Test system: rat hepatocytes
Concentration: 0,0316 - 100 mM
Metabolic activation: without
Method: OECD Test Guideline 482
Result: negative
GLP: yes

Test Type: In vitro gene mutation study in mammalian cells
Test system: Chinese hamster lung cells
Concentration: 14 - 55 mM
Metabolic activation: without
Method: OECD Test Guideline 476
Result: negative

GLP: No information available.
Remarks: By analogy with a product of similar composition

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

1-Methoxy-2-propanol:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 2 - 6250 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Concentration: 1,25 - 10 mg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: In vitro gene mutation study in mammalian cells
Test system: Chinese hamster lung cells
Concentration: 14 - 55 mM
Metabolic activation: without
Method: OECD Test Guideline 476
Result: negative
GLP: No information available.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Strain: CD1
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Exposure time: single injection
Dose: 2500-4000-5000-6000 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Carcinogenicity

Product:

Carcinogenicity - Assessment : No information available.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Carcinogenicity - Assessment : No information available.

2-methoxy-1-methylethyl acetate:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

1-Methoxy-2-propanol:

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

IARC No component 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 component 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

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Reproductive toxicity - Assessment : No information available.

2-methoxy-1-methylethyl acetate:

Effects on foetal development : Species: Rat
Strain: Sprague-Dawley
Application Route: Inhalation
Dose: 500 - 2000 - 4000 ppm
Duration of Single Treatment: 6 h
General Toxicity Maternal: NOAEL: 2.7 mg/l
Teratogenicity: NOAEL: > 22.5 mg/l
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

1-Methoxy-2-propanol:

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Strain: Sprague-Dawley

Application Route: Inhalation
Dose: 300 - 1000 - 3000 ppm
Duration of Single Treatment: 6 h
Frequency of Treatment: 5 - 7 days/week
General Toxicity - Parent: NOAEL: ca. 1.1 mg/l
General Toxicity F1: NOAEL: ca. 3.7 mg/l
General Toxicity F2: NOAEL: ca. 3.7 mg/l
Method: OECD Test Guideline 416
GLP: yes

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Strain: Fischer F344
Application Route: Inhalation
Dose: 500 - 1500 - 3000 ppm
Duration of Single Treatment: 6 h
General Toxicity Maternal: NOAEL: ca. 5.6 mg/l
Teratogenicity: NOAEL: ca. 5.6 mg/l
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.
No teratogenic effects to be expected.

STOT - single exposure

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

2-methoxy-1-methylethyl acetate:

Assessment: May cause drowsiness or dizziness.

1-Methoxy-2-propanol:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

2-methoxy-1-methylethyl acetate:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

1-Methoxy-2-propanol:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks: not tested.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Species: Rat, male and female
NOEL: 15 mg/kg bw/day
Application Route: oral (gavage)
Exposure time: 28 d
Dose: 15, 150, and 1000 mg/kg b.w./d
Group: yes
Method: Directive 84/449/EEC, B.7
GLP: yes

2-methoxy-1-methylethyl acetate:

Species: Rat, male and female
NOAEL: >= 1,000 mg/kg
Application Route: oral (gavage)
Exposure time: 44 d (m), 41-45 d (f)
Number of exposures: daily
Dose: 100 - 300 - 1000 mg/kg
Group: yes
Method: OECD Test Guideline 422
GLP: No information available.

Species: Rat, male and female
NOAEL: 5.5 mg/l
Application Route: Inhalation
Exposure time: 91 d
Number of exposures: 6 hours/day, 5 days/week
Dose: 300 - 1000 - 3000 ppm
Group: yes
Method: OECD Test Guideline 413
GLP: yes
Remarks: By analogy with a product of similar composition

Species: Rabbit, male and female
NOAEL: > 1,000 mg/kg
Application Route: Skin contact
Exposure time: 3 w
Number of exposures: 5 days/week
Dose: 1000 mg/kg
Method: OECD Test Guideline 410
GLP: yes
Remarks: By analogy with a product of similar composition

1-Methoxy-2-propanol:

Species: Rat, male
NOAEL: 919 mg/kg
LOAEL: 2,757 mg/kg
Application Route: oral (gavage)
Exposure time: 35 d
Number of exposures: 5 days/week
Dose: 91,9-275,7-919-2757 mg/kg
Group: yes
Method: OECD Test Guideline 407
GLP: no

Species: Rat, male and female
NOAEL: ca. 3.7 mg/l
Application Route: Inhalation
Test atmosphere: vapour
Exposure time: 13 w
Number of exposures: 6 hours/day, 5 days/week
Dose: 300 - 1000 - 3000 ppm
Group: yes
Method: OECD Test Guideline 413
GLP: yes

Species: Rabbit, male and female
NOAEL: > 1,000 mg/kg
Application Route: Dermal
Exposure time: 21 d
Number of exposures: 15 applications
Dose: 1000 mg/kg
Group: yes
Method: OECD Test Guideline 410
GLP: yes

Aspiration toxicity

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

No aspiration toxicity classification

2-methoxy-1-methylethyl acetate:

No aspiration toxicity classification

1-Methoxy-2-propanol:

No aspiration toxicity classification

Experience with human exposure

Product:

General Information : The possible symptoms known are those derived from the

labelling (see section 2).

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: not tested.

Toxicity to daphnia and other aquatic invertebrates : Remarks: not tested.

Toxicity to algae/aquatic plants : Remarks: not tested.

Toxicity to microorganisms : Remarks: not tested.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 0.5 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: Directive 67/548/EEC, Annex V, C.1.
GLP: yes
Remarks: No observable toxic effect in saturated solution.

LC0 (Leuciscus idus (Golden orfe)): > 0.5 mg/l
Exposure time: 96 h
Test Type: flow-through test
Method: Directive 67/548/EEC, Annex V, C.1.
GLP: yes
Remarks: No observable toxic effect in saturated solution.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.27 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 0.011 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

NOEC (Desmodesmus subspicatus (green algae)): 0.011 mg/l
End point: Growth rate
Exposure time: 72 h

Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : Remarks: not reasonable

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (Daphnia magna (Water flea)): 0.0031 mg/l
End point: Immobilization
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

EC50 (Daphnia magna (Water flea)): 0.0031 mg/l
End point: Reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

LOEC (Daphnia magna (Water flea)): 0.0033 mg/l
End point: Reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

NOEC (Daphnia magna (Water flea)): 0.0013 mg/l
End point: Reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes
Remarks: No observable toxic effect in saturated solution.

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

2-methoxy-1-methylethyl acetate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 100 - 180 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 203 GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 500 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: no Method: Regulation (EC) No. 440/2008, Annex, C.2 GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish (Chronic toxicity)	:	NOEC (Oryzias latipes (Orange-red killifish)): 47.5 mg/l Exposure time: 14 d Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 204 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): >= 100 mg/l End point: Reproduction rate Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to microorganisms	:	EC10 (activated sludge): > 1,000 mg/l Exposure time: 0.5 h Analytical monitoring: no Method: OECD Test Guideline 209 GLP: no Remarks: The details of the toxic effect relate to the nominal

concentration.

1-Methoxy-2-propanol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: no data available Method: OECD Test Guideline 203 GLP: No information available.
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 21,100 - 25,900 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: no data available Method: Other GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l End point: Growth rate Exposure time: 7 d Test Type: static test Analytical monitoring: no data available Method: Other GLP: yes
Toxicity to fish (Chronic toxicity)	:	Remarks: not required
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: not required
Toxicity to microorganisms	:	IC50 (activated sludge): > 1,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: static test Analytical monitoring: no data available Method: OECD Test Guideline 209 GLP: yes

Persistence and degradability

Product:

Biodegradability	:	Remarks: This property is substance-specific and therefore cannot be given for the preparation.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Biodegradability	:	aerobic Inoculum: activated sludge Concentration: 10 mg/l Carbon dioxide (CO2) Result: Not readily biodegradable. Biodegradation: 20 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes
Physico-chemical removability	:	Remarks: Not readily biodegradable.
Stability in water	:	Test Type: abiotic Degradation half life (Aqueous buffer solution.): 17 h (40 °C) pH: 4 Method: Other GLP: yes Test Type: abiotic Degradation half life (Aqueous buffer solution.): 135 h (60 °C) pH: 7 Method: Other GLP: yes Test Type: abiotic Degradation half life (Aqueous buffer solution.): 17 - 24 h (70 °C) pH: 7 Method: Other GLP: yes Test Type: abiotic Degradation half life (Aqueous buffer solution.): 44.9 h (40 °C) pH: 9 Method: Other GLP: yes

2-methoxy-1-methylethyl acetate:

Biodegradability	:	aerobic Inoculum: activated sludge Concentration: 76,4 mg ThOD/l Carbon dioxide (CO2) Result: Readily biodegradable. Biodegradation: 90 % Exposure time: 28 d Method: OECD Test Guideline 301F GLP: yes
Stability in water	:	Test Type: abiotic Degradation half life (Aqueous buffer solution.): > 10 d (50 °C) pH: 4 Method: OECD Test Guideline 111 GLP: No information available.

Test Type: abiotic
Degradation half life (Aqueous buffer solution.): > 10 d (50 °C)
pH: 7
Method: OECD Test Guideline 111
GLP: No information available.

Test Type: abiotic
Degradation half life (Aqueous buffer solution.): 8.1 d (50 °C)
pH: 9
Method: OECD Test Guideline 111
GLP: No information available.

1-Methoxy-2-propanol:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 86 mg/l
Dissolved organic carbon (DOC)
Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
GLP: yes

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.

Partition coefficient: n-octanol/water : log Pow: 7.439 (77 °F / 25 °C)
Method: OECD Test Guideline 123
GLP: yes

2-methoxy-1-methylethyl acetate:

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

Partition coefficient: n-octanol/water : log Pow: 1.2 (68 °F / 20 °C)
pH: 6.8
Method: OECD Test Guideline 117
GLP: yes

1-Methoxy-2-propanol:

Partition coefficient: n- : log Pow: < 1 (68 °F / 20 °C)

octanol/water	pH: 6.8 Method: OECD Test Guideline 117 GLP: No information available.

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: no data available

Components:

2-methoxy-1-methylethyl acetate:

Distribution among environmental compartments : Remarks: Not applicable

Other adverse effects

Product:

Environmental fate and pathways : Remarks: no data available

Additional ecological information : no data available

Components:

1-Acetyl-4-(3-dodecyl-2,5-dioxo-1-pyrrolidinyl)-2,2,6,6-tetramethyl-piperidine:

Environmental fate and pathways : no data available

Results of PBT and vPvB assessment : Remarks: no data available

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

2-methoxy-1-methylethyl acetate:

Environmental fate and pathways : not available

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

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

1-Methoxy-2-propanol:

Environmental fate and pathways : not available

Results of PBT and vPvB assessment	:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Additional ecological information	:	Do not allow to enter ground water, waterways or waste water.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	Yes -- If it becomes a waste as sold.
Waste Code	:	D001
Waste from residues	:	Small quantities may be treated in aerobic wastewater treatment systems. Larger quantities may be incinerated or landfilled after solidification in permitted systems.
Contaminated packaging	:	Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14. TRANSPORT INFORMATION

DOT Regulation:

UN/NA-number:	UN 1993
Proper shipping name:	Flammable liquids, n.o.s.
Technical Name:	2-Methoxy-1-methylethyl acetate Tetramethylpiperidine derivative
Primary hazard class:	3
Packing group:	III
Emergency Response Guide:	128

IATA

UN/ID number:	UN 1993
Proper shipping name:	Flammable liquid, n.o.s.
Hazard inducer(s):	2-Methoxy-1-methylethyl acetate Tetramethylpiperidine derivative
Primary risk:	3
Packing group:	III
Remarks:	Shipment permitted

IMDG

UN no.:	UN 1993
Proper shipping name:	Flammable liquid, n.o.s.
Hazard inducer(s):	2-Methoxy-1-methylethyl acetate Tetramethylpiperidine derivative

Primary risk:	3
Packing group:	III
Marine pollutant:	Marine Pollutant
EmS:	F-E S-E

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

A characteristic waste RQ of 100 lbs applies to this product in a waste form: D001

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS 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 : Flammable (gases, aerosols, liquids, or solids)
Respiratory or skin sensitisation
Skin corrosion or irritation

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

Clean Water Act

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

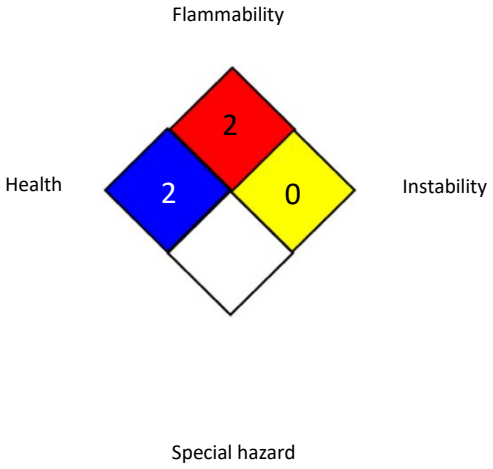
The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory, All components are compliant with the TSCA Inventory Notification (Active) rule.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
US WEEL / TWA	:	8-hr TWA

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; 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

On the basis of an extensive test program, which had to be submitted to the competent authority on the occasion of the Notification of the substance in the European Community, this product was found to be toxicologically not dangerous within the meaning of the EC Directives.
For additional information, contact Product Stewardship.

Revision Date : 03/06/2021

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express or implied, as to the information’s accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. NO EXPRESS OR IMPLIED WARRANTY IS MADE OF THE MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY PRODUCT OR SERVICE. Nothing included in this information waives any of Clariant’s General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.

US / EN