Substance key: 000000632937	Revision Date: 08/16/2016
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SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Produkte (Deutschland) GmbH Frankfurt am Main, 65926 Telephone No.: +49 69 305 18000 **Information of the substance/preparation:** Product Stewardship +1-704-331-7710 **Emergency tel. number:** +1 800-424-9300 CHEMTREC

Trade name:	**Hostavin TB-03**
Material number:	293547
Primary product use:	Class of additive: Light stabilizer
Chemical family:	mixture of HALS and UV absorber

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 3
Skin irritation	:	Category 2

GHS label elements

Hazard pictograms :

Signal word	:	Warning
Hazard statements	:	H226 Flammable liquid and vapour. H315 Causes skin irritation.
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. P264 Wash skin thoroughly after handling. 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.
P332 + P313 If skin irritation 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

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 39.95 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Substance name : mixture of HALS and UV absorber

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate	Not Assigned	30 - 50
2-Methoxy-1-methyl ethyl acetate	108-65-6	10 - 20
1-Methoxy-2-propanol	107-98-2	5 - 10

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

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 : Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or 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	:	irritant effects irritant effects
Notes to physician	:	Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Foam Dry powder Water spray jet
Unsuitable extinguishing media	:	High volume water jet Carbon dioxide (CO2)
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.

Technical measures/Precautions : 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-methyl ethyl acetate	108-65-6	TWA	50 ppm	US WEEL
		PEL	100 ppm 541 mg/m3	CAL PEL
	Further information: Skin			
		STEL	150 ppm 811 mg/m3	CAL PEL
	Further information: Skin			
1-Methoxy-2-propanol	107-98-2	TWA	50 ppm	ACGIH
	Further information: Upper Respiratory Tract irritation, Eye irritation, Not classifiable as a human carcinogen			
		STEL	100 ppm	ACGIH
	Further information: Upper Respiratory Tract irritation, Eye irritation, Not classifiable as a human carcinogen			
		TWA	100 ppm 360 mg/m3	NIOSH REL
		ST	150 ppm 540 mg/m3	NIOSH REL
		TWA	100 ppm 360 mg/m3	OSHA P0
		STEL	150 ppm 540 mg/m3	OSHA P0
		PEL	100 ppm 360 mg/m3	CAL PEL
	Further information: Skin			
		STEL	150 ppm 540 mg/m3	CAL PEL
	Further information: Skin			

Hazardous components without workplace control parameters

Components	CAS-No.
Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate	Not Assigned

Personal protective equipment

Respiratory protection : Use NIOSH/MSHA approved respirators following manufacturer's recommendations where dust or fume may be

generated.

Hand protection
Remarks : Butyl Rubber, PVC Or Neoprene.

Eye protection : Safety glasses or chemical splash goggles.

Skin and body protection : Wear suitable protective equipment.

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 (20 °C, 101.3 kPa)

Colour : yellow, to, light brown

Odour : aromatic

pH : not determined

Melting point : Not applicable

Boiling point : not determined

Flash point : 40.1 °C
Method: ABEL (DIN EN ISO 13736) (closed cup)

Evaporation rate : not tested.

Upper explosion limit : not tested.

Lower explosion limit : not tested.

Combustion number : Not applicable

Vapour pressure : not tested.

Relative vapour density : not tested.

Density : not tested.

Solubility(ies)
Water solubility : not tested.

Partition coefficient: n-octanol/water : not tested.

Auto-ignition temperature	:	not tested.
Decomposition temperature	:	not tested.
Viscosity		
Viscosity, dynamic	:	not tested.
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	See section 10.3. "Possibility of hazardous reactions"
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	not determined
Conditions to avoid	:	None known.
Incompatible materials	:	not known

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: 3,382 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Remarks: no data available
Acute dermal toxicity	:	Acute toxicity estimate: 2,669 mg/kg Method: Calculation method

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 GLP: no LD50 (Rat): > 2,000 mg/kg
Acute inhalation toxicity	:	Remarks: not tested.

Acute dermal toxicity : LD50 (Rats (Male/Female)): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

2-Methoxy-1-methyl ethyl 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
Method: Other
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

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
Method: OECD Test Guideline 403
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: Tested according to Directive 92/69/EEC.
GLP: yes

Skin corrosion/irritation

Product:

Remarks: no data available

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: irritating
GLP: yes

2-Methoxy-1-methyl ethyl 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: Tested according to Directive 92/69/EEC.
Result: No skin irritation
GLP: yes

Serious eye damage/eye irritation

Product:

Remarks: no data available

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

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

2-Methoxy-1-methyl ethyl acetate:

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

1-Methoxy-2-propanol:

Species: rabbit eye
Result: No eye irritation
Method: Tested according to Directive 92/69/EEC.
GLP: yes

Respiratory or skin sensitisation

Product:

Remarks: no data available

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Test Type: Maurer optimisation test
Species: Guinea pig
Method: OECD Test Guideline 406

Result: non-sensitizing
GLP: yes

2-Methoxy-1-methyl ethyl acetate:

Test Type: Guinea pig maximization test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

1-Methoxy-2-propanol:

Test Type: Guinea pig maximization test
Exposure routes: Skin contact
Species: Guinea pig
Method: Tested according to Directive 92/69/EEC.
Result: Does not cause skin sensitisation.
GLP: yes

Germ cell mutagenicity

Product:

Germ cell mutagenicity - Assessment : No information available.

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Concentration: 1,58 - 5000 µg/plate
Metabolic activation: with and without
Method: OECD Test Guideline 471
Result: Negative with and without metabolic activation
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Cell type: Bone marrow cells
Application Route: oral (gavage)
Exposure time: 24 - 48 - 72 h
Dose: 5000 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : Not mutagenic in Ames Test

In vivo Micronucleus negative.

2-Methoxy-1-methyl ethyl acetate:

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

: Test Type: DNA damage and repair assay
Species: 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
Species: 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 : It is concluded that the product is not mutagenic based on evaluation of several mutagenicity tests.

1-Methoxy-2-propanol:

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

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

: Test Type: In vitro gene mutation study in mammalian cells
Species: 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: yes

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

Carcinogenicity

Product:

Carcinogenicity - Assessment : No information available.

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Carcinogenicity - Assessment : No information available.

2-Methoxy-1-methyl ethyl acetate:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

1-Methoxy-2-propanol:

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

IARC Not listed

OSHA Not listed

NTP Not listed

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : No information available.

No information available.

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Effects on fertility :

Remarks: This information is not available.

Effects on foetal development : Remarks: This information is not available.

Reproductive toxicity - Assessment : No information available.

No information available.

2-Methoxy-1-methyl ethyl acetate:

Effects on fertility :

Test Type: Two-generation study
Species: Rat
Sex: male and female
Dose: 300 - 1000 - 3000 ppm
Frequency of Treatment: daily, 6 h/day
Sprague-Dawley
Application Route: Inhalation
NOAEL: ca. 1.6 mg/l,
F1: ca. 5.5 mg/l,
F2: ca. 5.5 mg/l,
Method: OECD Test Guideline 416
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development :

Species: Rat
Application Route: Inhalation
Exposure time: gestation day 6-15
Dose: 500 - 2000 - 4000 ppm
Group: yes
> 22.5 mg/l
2.7 mg/l
Number of exposures: 6 hours/day
Method: OECD Test Guideline 414
GLP: yes

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

1-Methoxy-2-propanol:

Effects on fertility :

Test Type: Two-generation study
Species: Rat
Sex: male and female

Dose: 300 - 1000 - 3000 ppm
Frequency of Treatment: 6 h/day, 5-7 days/week
Sprague-Dawley
Application Route: Inhalation
Group: yes
NOAEL: ca. 1.1 mg/l, 300 ppm,
F1: ca. 3.7 mg/l, 1000 ppm,
F2: ca. 3.7 mg/l, 1000 ppm
Method: OECD Test Guideline 416
GLP: yes

Effects on foetal development : Species: Rat
Application Route: Inhalation
Exposure time: days 6-15 of gestation
Dose: 500 - 1500 - 3000 ppm
Group: yes
ca. 5.6 mg/l
1500 ppm
ca. 5.6 mg/l
1500 ppm
Number of exposures: 6 h/day
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:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Remarks: not available

2-Methoxy-1-methyl ethyl acetate:

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

1-Methoxy-2-propanol:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Remarks: not available

2-Methoxy-1-methyl ethyl 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: This information is not available.

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Species: Rats (Male/Female)
NOAEL: 200 mg/kg
Application Route: oral (gavage)
Exposure time: 28 days
Dose: 40 - 200 - 1000 mg/kg
Method: Repeated Dose Toxicity (subacute study)
GLP: yes

2-Methoxy-1-methyl ethyl 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: ca. 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
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: Skin contact
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:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

No aspiration toxicity classification

2-Methoxy-1-methyl ethyl acetate:

No aspiration toxicity classification

1-Methoxy-2-propanol:

No aspiration toxicity classification

Further information

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Remarks: Can be absorbed through skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: no data available
Toxicity to algae	:	Remarks: no data available
Toxicity to bacteria	:	Remarks: no data available

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 2 mg/l Exposure time: 96 h Test Type: static test Method: Directive 67/548/EEC, Annex V, C.1. 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)): 131.7 mg/l Exposure time: 24 h Method: OECD Test Guideline 202 GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae	:	Remarks: not tested.
Toxicity to fish (Chronic toxicity)	:	Remarks: not tested.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: not tested.

Toxicity to bacteria	:	EC50 (activated sludge, domestic): > 1,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Method: OECD Test Guideline 209
Toxicity to soil dwelling organisms	:	Test Type: artificial soil LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg Exposure time: 14 d End point: mortality Method: OECD Test Guideline 207 GLP: yes Test Type: artificial soil LOEC (Eisenia fetida (earthworms)): 1,000 mg/kg Exposure time: 14 d End point: mortality Method: OECD Test Guideline 207 GLP: yes Test Type: artificial soil NOEC (Eisenia fetida (earthworms)): 500 mg/kg Exposure time: 14 d End point: mortality Method: OECD Test Guideline 207 GLP: yes
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

2-Methoxy-1-methyl ethyl 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: Directive 67/548/EEC, Annex V, C.2. GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to algae	:	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 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 Exposure time: 21 d End point: Reproduction rate 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 bacteria	:	EC10 (activated sludge, industrial): > 1,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 0.5 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

1-Methoxy-2-propanol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): >= 1,000 mg/l Exposure time: 96 h Test Type: semi-static test Analytical monitoring: no data available

		Method: OECD Test Guideline 203 GLP: No information available. Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 21,100 - 25,900 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: no data available Method: Other GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae	:	EC50 (Scenedesmus capricornutum (fresh water 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 Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish (Chronic toxicity)	:	Remarks: not required
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: not required
Toxicity to bacteria	:	IC50 (activated sludge): > 1,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no data available Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

Persistence and degradability

Product:

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

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Biodegradability : Inoculum: domestic sewage
Concentration: 169 mg/l
COD decrease
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: no
Remarks: Not readily biodegradable.

Biochemical Oxygen Demand (BOD) : 159 mg/g
Incubation time: 5 d
Method: Other
GLP: no

Chemical Oxygen Demand (COD) : 1,950 mg/g
Method: Other
GLP: no

BOD/COD : BOD: 159 mg/g (BSB5)COD: 1950 mg/gBOD/COD: 8.2 %

Physico-chemical removability : Remarks: Not readily biodegradable.

2-Methoxy-1-methyl ethyl acetate:

Biodegradability : aerobic
Inoculum: activated sludge, domestic, non-adapted
Concentration: 76,4 mg ThOD/l
CO2 formation in % of theoretical value
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: predominantly domestic sewage
Concentration: 86 mg/l
DOC decrease
Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 28 d
Method: OECD Test Guideline 301E
GLP: yes

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Bioaccumulation : Remarks: not tested.

Partition coefficient: n-octanol/water : Remarks: Not applicable

2-Methoxy-1-methyl ethyl acetate:

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

1-Methoxy-2-propanol:

Bioaccumulation : Remarks: Due to the low logPow bioaccumulation is not expected

Mobility in soil

Components:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

Distribution among environmental compartments : Remarks: not tested.

2-Methoxy-1-methyl ethyl acetate:

Distribution among environmental compartments : Remarks: Not applicable

1-Methoxy-2-propanol:

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:

Mixture of dodecyl and tetradecyl 3-(2,2,4,4-tetramethyl-21-oxo-7-oxa-3 ,20-diazadispiro(5.1.11.2) henicosan-20-yl)propionate:

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-methyl ethyl 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:

Proper shipping name:	Flammable liquids, n.o.s.
Hazard class:	3
Packing group:	III
UN/NA-number:	UN 1993
Primary hazard class:	3
Technical Name:	2-Methoxy-1-methylethyl acetate Propionic acid ester derivatives

IATA

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

IMDG

Proper shipping name:	Flammable liquid, n.o.s.
Class:	3
Packing group:	III
UN no.:	UN 1993
Primary risk:	3
Hazard inducer(s):	2-Methoxy-1-methylethyl acetate Propionic acid ester derivatives
Hazard inducer / Marine pollutant:	Propionic acid ester derivatives
Marine pollutant:	Marine Pollutant
EmS:	F-E S-E

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

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 311/312 Hazards	:	Fire Hazard Acute Health Hazard
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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

Further information

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.

Revision Date : 08/16/2016

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