Substance key: 000000645618	Revision Date: 11/08/2016
Version : 2 - 0 / CDN	Date of printing :11/28/2016

SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Plastics and Coatings Canada Inc. 2 Lone Oak Court Toronto, Ontario M9C 5R9, Telephone No.: +1 416-847-7000 **Information of the substance/preparation:** BU Masterbatches Product Stewardship, +1-704-331-7710 e-mail: SDS.NORAM@clariant.com **Emergency tel. number:** +1 800-424-9300 CHEMTREC, +1 (703) 527-3887 INTERNATIONAL
Trade name:	**CV0-Z0N-0N WHITE TFA GLD**
Synonyms:	PVC RVC-544 004.000% WHITE (01VFV-110)
Chemical family:	Colourant preparation Carrier: PVC
Primary product use:	Additive for plastic material processing

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

Hazards Not Otherwise Classified:
If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Colourant preparation
Carrier: PVC

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
2-Ethylhexyl mercaptoacetate	7659-86-1	< 0.1
Dioctyltin mercaptoacetate	15535-79-2	< 0.1
2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate	27107-89-7	0.5 - 1

Di-n-octyltin-bis-(2-ethylhexylthioglycolate)	15571-58-1	1 - 2.5
Calcium distearate	1592-23-0	2.5 - 3
C.I. Pigment White 6	13463-67-7	25 - 40

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) and by the Canadian WHMIS 2015 Hazardous Products Regulations (SOR/2015-17)., The hazardous ingredients of this product are encapsulated, therefore the material is not GHS classified for health and environmental hazards as exposure is not expected., Any concentration shown as a range is due to batch variation.

SECTION 4. FIRST AID MEASURES

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 off immediately with plenty of water for at least 15 minutes.
In case of burns apply cold water until pain subsides then seek medical advice.
Burns must be treated by a physician.
If molten polymer contact the skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical attention for thermal burn. Skin absorption of reground pellets is unlikely.

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 : Rinse mouth.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Get medical advice/ attention.

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
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting	:	In case of fire hazardous decomposition products may be produced such as: Hydrogen chloride Carbon monoxide Carbon dioxide (CO2) Metal oxides Acrolein Sulphur oxides tin oxides
Further information	:	Combustible material In the event of fire and/or explosion do not breathe fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
Environmental precautions	:	Do not allow contact with soil, surface or ground water. Prevent product from entering drains.
Methods and materials for containment and cleaning up	:	Avoid dust formation. Take measures to prevent the build up of electrostatic charge. Sweep up and shovel into suitable containers for disposal. Take up uncontaminated material and pass on for further processing. After cleaning, flush away traces with water.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Take measures to prevent the build up of electrostatic charge.
Advice on safe handling	:	Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation/personal protection. For personal protection see section 8. Avoid contact with skin, eyes and clothing.

Use only with adequate ventilation.
When handling hot melts use suitable protective clothing.
Avoid dust formation. Keep away from sources of ignition.
Lead off electrostatic charges.

Conditions for safe storage : Keep container tightly closed in a cool, well-ventilated place.
Protect from moisture.
Keep away from direct sunlight.

Technical measures/Precautions : Store in a cool, dry, well-ventilated area. Keep container sealed when not in use.
Keep in an area equipped with sprinklers.
Minimize dust generation and accumulation.

Materials to avoid : not required

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
C.I. Pigment White 6	13463-67-7	TWA	10 mg/m3	CA AB OEL
	Further information: Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWA	10 mg/m3	CA BC OEL
	Further information: IARC '2B' applies to substances deemed possibly carcinogenic to humans., The 8-hour TWA listed in the Table is for the total dust. The substance also has an 8-hour TWA of 3 mg/m3 for the respirable fraction.			
		TWAEV (Total)	10 mg/m3	CA ON OEL
		TWAEV (total dust)	10 mg/m3	CA QC OEL
	Further information: The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
		TWAEV (total dust)	10 mg/m3	CA QC OEL
	Further information: The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1 %.			
Calcium distearate	1592-23-0	TWA	10 mg/m3	CA AB OEL
	Further information: Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		TWAEV (Total)	10 mg/m3	CA ON OEL

		TWA	10 mg/m3	CA BC OEL
	Further information: Does not include stearates of toxic metals.			
Dioctyltin mercaptoacetate	15535-79-2	TWAEV	0.1 mg/m3 (Tin)	CA ON OEL
	Further information: Skin			
		TWA	0.1 mg/m3 (Tin)	CA AB OEL
	Further information: Substance may be readily absorbed through intact skin			
		STEL	0.2 mg/m3 (Tin)	CA AB OEL
	Further information: Substance may be readily absorbed through intact skin			
		TWAEV	0.1 mg/m3 (Tin)	CA QC OEL
	Further information: Skin (percutaneous)			
		STEV	0.2 mg/m3 (Tin)	CA QC OEL
	Further information: Skin (percutaneous)			
		TWA	0.1 mg/m3 (Tin)	CA BC OEL
	Further information: Contributes significantly to the overall exposure by the skin route.			
		STEL	0.2 mg/m3 (Tin)	CA BC OEL
	Further information: Contributes significantly to the overall exposure by the skin route.			
		TWA	0.1 mg/m3 (Tin)	CA ON OEL
	Further information: Skin			

Engineering measures : Use only in area provided with appropriate exhaust ventilation.
Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.
Use engineering controls such as local or general exhaust to maintain airborne concentrations below exposure limits.

Personal protective equipment

Respiratory protection : Use NIOSH/MSHA approved respirators following manufacturer's recommendations where dust or fume may be generated.
Use respiratory protective equipment when using this product at elevated temperatures (see section 8).

Hand protection
Remarks : Nitrile rubber gloves. Impervious butyl rubber gloves PVC Neoprene gloves When handling hot material, use heat resistant gloves.

Eye protection : Safety glasses with side-shields

Skin and body protection	:	Wear protective clothing, including long sleeves and gloves, to prevent skin contact. When handling hot melts use suitable protective clothing.
Hygiene measures	:	The usual Industrial Hygiene precautions must be taken during work, in particular: do not drink, eat or smoke during the handling of the product and clean hands and face during work intervals and after work.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Granules
Colour	:	white
Odour	:	characteristic
Odour Threshold	:	Not applicable
pH	:	Not applicable
Melting point	:	> 70 °C
Boiling point	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	not determined
Self-ignition	:	Not applicable
Upper explosion limit	:	not tested.
Lower explosion limit	:	not tested.
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	not available
Density	:	not tested.
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	This property is not applicable for mixtures.

Decomposition temperature	:	> 200 °C
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	no data available no data available
Oxidizing properties	:	not available
Surface tension	:	Not relevant
Particle size	:	Product specific

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable
Possibility of hazardous reactions	:	Lithium
Conditions to avoid	:	To avoid thermal decomposition, do not overheat. Heating can release hazardous gases. Keep away from heat, sparks, open flames, and other sources of ignition. If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Incompatible materials	:	Strong acids and oxidizing agents Incompatible with acids. Strong acids acetal homopolymers and acetal copolymers Amines Strong oxidizing agents Strong bases
Hazardous decomposition products	:	No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

None known.

Acute toxicity

Components:

Dioctyltin mercaptoacetate:

Acute oral toxicity : LD50 (Rat, female): 300 - 2,000 mg/kg
Method: OECD Test Guideline 420
GLP: yes

Acute inhalation toxicity : Remarks: Not applicable

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: By analogy with a product of similar composition

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Acute oral toxicity : LD50 (Rat, male and female): 2,000 - 5,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute inhalation toxicity : Remarks: Not applicable

Acute dermal toxicity : LD0 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Calcium distearate:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403
GLP: yes
Remarks: By analogy with a product of similar composition

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: By analogy with a product of similar composition

C.I. Pigment White 6:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
Method: OECD Test Guideline 425
GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): 3.4 - 5.1 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

GLP: no

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Not applicable

Skin corrosion/irritation

Product:

Result: No skin irritation

Components:

Dioctyltin mercaptoacetate:

Species: EPISKIN Human Skin Model Test
Exposure time: 4 h
Method: OECD Test Guideline 439
Result: No skin irritation
GLP: yes

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: Mild skin irritation
GLP: yes

Calcium distearate:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes
Remarks: By analogy with a product of similar composition

C.I. Pigment White 6:

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

Serious eye damage/eye irritation

Product:

Result: No eye irritation

Components:

Dioctyltin mercaptoacetate:

Species: rabbit eye
Result: Mild eye irritation
Exposure time: 96 h
Assessment: No skin irritation
Method: OECD Test Guideline 405
GLP: yes

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Species: rabbit eye
Result: non-irritant
Method: OECD Test Guideline 405
GLP: yes

Calcium distearate:

Species: rabbit eye
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: yes
Remarks: By analogy with a product of similar composition

C.I. Pigment White 6:

Species: rabbit eye
Result: non-irritant
Method: OECD Test Guideline 405
GLP: No information available.

Respiratory or skin sensitisation

Product:

Result: non-sensitizing

Components:

Dioctyltin mercaptoacetate:

Test Type: Mouse local lymphnode assay
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: Does not cause skin sensitisation.
GLP: yes
Remarks: By analogy with a product of similar composition

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Test Type: Guinea pig maximization test
Exposure routes: Skin contact

Species: Guinea pig
Method: OECD Test Guideline 406
Result: slightly sensitizing
GLP: yes

Calcium distearate:

Test Type: Mouse local lymphnode assay
Exposure routes: Dermal
Species: Mouse
Method: OECD Test Guideline 429
Result: Does not cause skin sensitisation.
GLP: yes
Remarks: By analogy with a product of similar composition

Test Type: Respiratory system
Exposure routes: Inhalation
Remarks: This information is not available.

C.I. Pigment White 6:

Test Type: Mouse local lymphnode assay
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: non-sensitizing
GLP: No information available.

Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: non-sensitizing
GLP: yes

Test Type: Respiratory system
Exposure routes: inhalation (dust/mist/fume)
Species: Mouse
Method: Other
Result: Does not cause respiratory sensitisation.
GLP: No information available.

Germ cell mutagenicity

Components:

Dioctyltin mercaptoacetate:

Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Concentration: 50 - 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

: Test Type: Ames test
Species: Escherichia coli
Concentration: 50 - 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Chromosome Aberration Test
Species: Mouse (male)
Strain: Swiss Webster
Cell type: Bone marrow cells
Application Route: oral (gavage)
Exposure time: one treatment
Dose: 500 - 1000 - 2000 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes
Test substance: other TS

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

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Genotoxicity in vitro : Test Type: In vitro gene mutation study in mammalian cells
Species: mouse lymphoma cells
Concentration: 2,4 - 55 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: positive
GLP: yes

: Test Type: Chromosome aberration test in vitro
Species: Cultured peripheral human lymphocytes
Concentration: 3,9 - 2000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Chromosome Aberration Test
Species: Rat (male)
Strain: wistar
Cell type: Bone marrow cells
Application Route: oral (gavage)
Exposure time: 48 h
Dose: 250 - 500 - 1000 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.

Calcium distearate:

Genotoxicity in vitro	:	Test Type: Ames test Species: Salmonella typhimurium Method: OECD Test Guideline 471 Result: negative GLP: yes
	:	Test Type: In vitro gene mutation study in mammalian cells Species: mouse lymphoma cells Method: OECD Test Guideline 476 Result: negative GLP: yes Remarks: By analogy with a product of similar composition
	:	Test Type: Cytogenetic assay Species: V79 cells (embryonic lung fibroblasts) of the Chinese hamster Method: OECD Test Guideline 473 Result: negative GLP: yes 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.

C.I. Pigment White 6:

Genotoxicity in vitro	:	Test Type: Ames test Species: Salmonella typhimurium Concentration: 333 - 5000 µg/plate Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes
	:	Test Type: Ames test Species: Escherichia coli Concentration: 333 - 5000 µg/plate 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: ICR Cell type: Erythrocytes Application Route: oral (gavage) Exposure time: single treatment Dose: 500 - 1000 - 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.

Carcinogenicity

Components:

Dioctyltin mercaptoacetate:

Carcinogenicity - Assessment : No information available.

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Carcinogenicity - Assessment : No information available.

Calcium distearate:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

C.I. Pigment White 6:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Components:

Dioctyltin mercaptoacetate:

Effects on fertility :

Test Type: One generation study
Species: Rat
Sex: male and female
Dose: 5 - 25 - 250 mg/kg diet
Exposure time: 28 d
wistar
Application Route: oral (feed)
Group: yes
NOAEL: 0.3 - 0.5 mg/kg,
Method: OECD Test Guideline 422
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development : Species: Rat
Application Route: oral (feed)
Exposure time: 28 d
Dose: 5 - 25 - 250 mg/kg diet

Group: yes
0.3 - 0.5 mg/kg
Number of exposures: daily
Method: OECD Test Guideline 422
GLP: yes
Remarks: By analogy with a product of similar composition

Reproductive toxicity - Assessment : Suspected of damaging fertility. Suspected of damaging the unborn child.
Damage to fetus possible

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Effects on fertility :

Test Type: One generation study
Species: Rat
Sex: male and female
Dose: 200 - 500 - 1250 mg/kg diet
Exposure time: 28 d (m), 42 d (f)
wistar
Application Route: oral (feed)
Group: yes
NOAEL: ca. 71.8 - 95.7 mg/kg,
F1: 71.8 - 95.7 mg/kg,
Method: OECD Test Guideline 421
GLP: yes

Effects on foetal development : Species: Rat
Application Route: oral (feed)
Exposure time: gestation day 6-19
Dose: 500 - 1250 - 3000 mg/kg diet
Group: yes
208 mg/kg
35 mg/kg
Number of exposures: continiously
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : Classification as "toxic for reproduction" is not justifiable.
Classification as "teratogenic" is not justifiable.

Calcium distearate:

Effects on fertility :

Species: Rat
Application Route: Oral
NOAEL: > 1,000 mg/kg,
F1: > 1,000 mg/kg,
Method: OECD Test Guideline 421
GLP: yes

Effects on foetal development : Species: Rat
Application Route: Oral

> 1,000 mg/kg
Method: OECD Test Guideline 414
GLP: yes
Remarks: By analogy with a product of similar composition

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

C.I. Pigment White 6:

Effects on fertility :

Remarks: The study is not necessary from a scientific perspective.

Effects on foetal development : Remarks: The study is not necessary from a scientific perspective.

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

STOT - single exposure

Components:

Dioctyltin mercaptoacetate:

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

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

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

Calcium distearate:

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

C.I. Pigment White 6:

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

STOT - repeated exposure

Components:

Dioctyltin mercaptoacetate:

Assessment: Causes damage to organs through prolonged or repeated exposure.

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Assessment: May cause damage to organs through prolonged or repeated exposure.

Calcium distearate:

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

C.I. Pigment White 6:

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

Repeated dose toxicity

Components:

Dioctyltin mercaptoacetate:

Species: Rat, male and female
NOAEL: 0.3 - 0.5 mg/kg
Application Route: oral (feed)
Exposure time: 28 d
Number of exposures: daily
Dose: 5 - 25 - 250 mg/kg diet
Group: yes
Method: OECD Test Guideline 422
GLP: yes

Application Route: Inhalation
Remarks: The study is not necessary from a scientific perspective.

Application Route: Skin contact
Remarks: The study is not necessary from a scientific perspective.

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Species: Rat, male and female
NOAEL: 82 - 91 mg/kg
Application Route: oral (feed)
Exposure time: 13 w
Number of exposures: continiously
Dose: 200 - 500 - 1250 mg/kg diet
Group: yes
Method: OECD Test Guideline 408
GLP: yes

Calcium distearate:

Species: Rat
NOAEL: > 2,000 mg/kg
Application Route: Oral
Method: OECD Test Guideline 407

GLP: yes

C.I. Pigment White 6:

Species: Rat, male
NOAEL: 24,000 mg/kg
Application Route: oral (gavage)
Exposure time: 29 d
Number of exposures: daily
Dose: 24000 mg/kg
Group: yes
Method: OECD Test Guideline 407
GLP: No information available.

Species: Rat, male and female
NOAEL: 0.01 mg/l
Application Route: Inhalation
Exposure time: 2 a
Number of exposures: 6 hours/day, 5 days/week
Dose: 0,0106 - 0,0507 - 0,250 mg/l
Group: yes
Method: Repeated Dose Toxicity (chronic Toxicity)
GLP: no

Application Route: Skin contact
Remarks: The study is not necessary from a scientific perspective.

Aspiration toxicity

Components:

Dioctyltin mercaptoacetate:

No aspiration toxicity classification

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

No aspiration toxicity classification

Calcium distearate:

No aspiration toxicity classification

C.I. Pigment White 6:

No aspiration toxicity classification

Experience with human exposure

Product:

General Information : The possible symptoms known are those derived from the labelling (see section 2).

Further information

Components:

C.I. Pigment White 6:

Remarks: Lung damage possible.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: no data available

Components:

2-Ethylhexyl mercaptoacetate:

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

Dioctyltin mercaptoacetate:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 0.09 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: By analogy with a product of similar composition

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.21 mg/l
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: By analogy with a product of similar composition

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 0.0018 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: no
Remarks: By analogy with a product of similar composition

NOEC (Desmodesmus subspicatus (green algae)): 0.00097 mg/l
End point: Growth rate

Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: no
Remarks: By analogy with a product of similar composition

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: not required

Toxicity to microorganisms : EC50 (activated sludge of a predominantly domestic sewage): > 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.

NOEC (activated sludge of a predominantly domestic sewage): 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: By analogy with a product of similar composition
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

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 945 µg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: The product has low solubility in the test medium.

An aqueous dispersion was tested.

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): ca. 20 - 40 µg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 8.8 µg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: Directive 87/302/EEC, part C, p. 89 GLP: yes Remarks: The product has low solubility in the test medium. An aqueous dispersion was tested. NOEC (Desmodesmus subspicatus (green algae)): 8.8 µg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: The product has low solubility in the test medium. An aqueous dispersion was tested.
Toxicity to fish (Chronic toxicity)	:	Remarks: not required
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 36 µg/l Exposure time: 21 d End point: mortality Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: Directive 87/302/EEC, part C, p. 118 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to soil dwelling	:	Remarks: Not applicable

organisms		
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	Remarks: Not applicable

Di-n-octyltin-bis-(2-ethylhexylthioglycolate):

M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

Calcium distearate:

Toxicity to fish	:	LC50 (Orycias latipes): > 100 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to fish (Chronic toxicity)	:	Remarks: not required
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): > 0.22 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes Remarks: By analogy with a product of similar composition
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Method: OECD Test Guideline 209 GLP: yes Remarks: By analogy with a product of similar composition
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable

Sediment toxicity	:	Remarks: no data available
Toxicity to terrestrial organisms	:	Remarks: Not applicable

C.I. Pigment White 6:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: no Method: EPA GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration. LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 203 GLP: No information available. Remarks: The details of the toxic effect relate to the nominal concentration. LC50 (Cyprinodon variegatus (sheepshead minnow)): > 10,000 mg/l Exposure time: 96 h Test Type: semi-static test Analytical monitoring: no data available Method: OECD Test Guideline 203 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: no data available Method: OECD Test Guideline 202 GLP: no data available Remarks: The details of the toxic effect relate to the nominal concentration. LC50 (Acartia tonsa): > 10,000 mg/l Exposure time: 48 h Analytical monitoring: no data available Method: ISO 14669 and PARCOM method GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (microalgae)): 61 mg/l End point: Growth rate

Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: EPA
GLP: No information available.
Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: no data available
Method: ISO 10253
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to fish (Chronic toxicity) : LC50 (Oncorhynchus mykiss (rainbow trout)): 7.31 mg/l
Exposure time: 28 d
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: No information available.
Remarks: By analogy with a product of similar composition

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: Not applicable

Toxicity to microorganisms : EC50 (activated sludge of a predominantly domestic sewage): > 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC (activated sludge of a predominantly domestic sewage): >= 1,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms : Test Type: artificial soil
NOEC (Folsomia candida): 0,1 -<= 10 %
Exposure time: 28 d
End point: mortality
Method: ISO 11267

GLP: no
Remarks: By analogy with a product of similar composition
This product does not have any known adverse effect on the soil organisms tested.

Plant toxicity : NOEC (Lactuca sativa (lettuce)): >= 10 %
Exposure time: 20 h
End point: Growth
Analytical monitoring: yes
Method: Other
GLP: no
Remarks: By analogy with a product of similar composition
No effect on the growth was observed.

Sediment toxicity : NOEC (Hyalella azteca (Scud)): >= 100000 %
Analytical monitoring: no
Sediment: artificial soil
Exposure duration: 28 d
Nominal / Measured: nominal
Basis for effect: mortality
Test substance: artificial soil
Analytical monitoring: no
Method: Other
GLP: no
Remarks: By analogy with a product of similar composition

NOEC: >= 14989 mg/kg dry weight (d.w.)
Analytical monitoring: no data available
Sediment: Natural sediment
Exposure duration: 10 d
Nominal / Measured: nominal
Basis for effect: mortality
Test substance: Natural sediment
Analytical monitoring: no data available
Method: Other
GLP: yes

Toxicity to terrestrial organisms : Remarks: Not applicable

Persistence and degradability

Components:

Dioctyltin mercaptoacetate:

Biodegradability : aerobic
Inoculum: activated sludge, domestic
Concentration: 23.7 mg/l
BOD in % of theoretical OD
Result: Not readily biodegradable.
Biodegradation: 1.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: By analogy with a product of similar composition

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Biodegradability : aerobic
Inoculum: activated sludge, domestic, non-adapted
Concentration: 50 mg/l
BOD in % of theoretical OD
Result: Not readily biodegradable.
Biodegradation: 30 - 40 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

Calcium distearate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 93 %
Method: OECD Test Guideline 301C

Result: Readily biodegradable.
Biodegradation: 99 %
Method: OECD Test Guideline 301B

C.I. Pigment White 6:

Biodegradability : Remarks: Not applicable for inorganic compound.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

Dioctyltin mercaptoacetate:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): < 100
Exposure time: 30 d
Concentration: 0.0025 mg/l
Method: OECD Test Guideline 305
GLP: yes
Remarks: By analogy with a product of similar composition

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 99 - 1,294
Exposure time: 30 d
Concentration: DOT: 0,25 - 2,5 µg/l
Method: OECD Guide-line 305 B
GLP: yes
Remarks: By analogy with a product of similar composition

Calcium distearate:

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

C.I. Pigment White 6:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 20 - 200
Exposure time: 14 d
Concentration: 0.1 - 1 mg/l
Method: Other
GLP: No information available.
Remarks: Does not accumulate in organisms.

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not tested.

Components:

Dioctyltin mercaptoacetate:

Distribution among environmental compartments : Remarks: Not applicable

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

Distribution among environmental compartments : Remarks: Not applicable

C.I. Pigment White 6:

Mobility : Remarks: Adsorption to solid soil phase is possible.

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
log Koc: 4.61
Method: Other

Other adverse effects

Product:

Results of PBT and vPvB assessment : Remarks: No information is available as no chemical safety report (CSR) is required.

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

Components:

Dioctyltin mercaptoacetate:

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.

2-Ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate:

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.

Calcium distearate:

Results of PBT and vPvB assessment	:	The substance is not identified as a PBT or as a vPvB substance.
Additional ecological information	:	Do not allow to enter ground water, waterways or waste water.

C.I. Pigment White 6:

Environmental fate and pathways	:	not available
Results of PBT and vPvB assessment	:	The substance is inorganic, thus a PBT and vPvB criteria assessment is not applicable according to Annex XIII of Regulation (EC) 1907/2006.
Additional ecological information	:	Do not allow to enter ground water, waterways or waste water.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of this product in accordance with all applicable local, state and federal regulations.
Contaminated packaging	:	Regulations concerning reuse or disposal of used packaging materials must be observed.

SECTION 14. TRANSPORT INFORMATION

TDG	not restricted
IATA	not restricted
IMDG	not restricted

SECTION 15. REGULATORY INFORMATION

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

DSL : This product contains one or several components listed in the Canadian NDSL.

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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