SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Plastics & Coating USA LLC 4000 Monroe Road Charlotte, NC, 28205 Telephone No.: +1 704 331 7000 **Information of the substance/preparation:** BU Masterbatches Product Stewardship, +1-704-331-7710 e-mail: SDS.NORAM@clariant.com **Emergency tel. number:** 800-424-9300 (CHEMTREC)

Trade name: **RENOL-SFR CHAMPAGNE-PN**
Material number: EV82800002

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

Skin sensitisation	:	Category 1
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - repeated exposure (Oral)	:	Category 1
Specific target organ toxicity - repeated exposure	:	Category 2 (Lungs)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs () through prolonged or

repeated exposure.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

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

Components

Chemical name	CAS-No.	Concentration (% w/w)
C.I. Pigment Yellow 164	68412-38-4	0.1 - 1
Aluminium oxide	1344-28-1	0.1 - 1
Calcium distearate	1592-23-0	0.1 - 1
Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax	Not Assigned	1 - 5
C.I. Pigment Brown 24	68186-90-3	1 - 5
Di-n-octyltin-bis-(2-ethylhexylthioglycolate)	15571-58-1	1 - 5
C.I. Pigment White 6	13463-67-7	10 - 30
Mica-Group minerals	12001-26-2	10 - 30
Polyvinyl chloride	9002-86-2	30 - 60

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

SECTION 4. FIRST AID MEASURES

General advice	:	Ensure that the First Aid Personnel are aware of the product involved, and take precautions to protect themselves (e.g. wear personal protection equipment). 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 off immediately with plenty of water for at least 15 minutes. Wash off with soap and water. Get medical attention if irritation develops and persists.
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) Sulphur oxides Metal 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	:	Non-sparking tools should be used. Avoid dust formation. Take measures to prevent the build up of electrostatic charge. Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

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. Avoid dust formation. Take measures to prevent the build up of electrostatic charge. Ensure all equipment is electrically grounded before beginning transfer operations. Use only non-sparking tools.
Conditions for safe storage	:	Keep container tightly closed in a cool, well-ventilated place. Protect from moisture.

Keep away from direct sunlight.

Further information on storage conditions : 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 Brown 24	68186-90-3	TWA	0.5 mg/m3 (antimony)	CA AB OEL
		TWAEV	0.5 mg/m3 (antimony)	CA QC OEL
		TWA	0.5 mg/m3 (antimony)	CA BC OEL
		TWA	0.5 mg/m3 (antimony)	ACGIH
C.I. Pigment Yellow 164	68412-38-4	TWA	0.5 mg/m3 (antimony)	CA AB OEL
		TWA	0.2 mg/m3 (Manganese)	CA AB OEL
		TWAEV	0.5 mg/m3 (antimony)	CA QC OEL
		TWAEV (total dust)	0.2 mg/m3 (Manganese)	CA QC OEL
		TWA	0.5 mg/m3 (antimony)	CA BC OEL
		TWA (Respirable)	0.02 mg/m3 (Manganese)	CA BC OEL
		TWA (Total)	0.2 mg/m3 (Manganese)	CA BC OEL
		TWA	0.5 mg/m3 (antimony)	ACGIH
		TWA (Inhalable fraction)	0.1 mg/m3 (Manganese)	ACGIH
		TWA (Respirable fraction)	0.02 mg/m3 (Manganese)	ACGIH
C.I. Pigment White 6	13463-67-7	TWA	10 mg/m3	CA AB OEL
		TWA (Total dust)	10 mg/m3	CA BC OEL

		TWA (respirable dust fraction)	3 mg/m3	CA BC OEL
		TWAEV (total dust)	10 mg/m3	CA QC OEL
Aluminium oxide	1344-28-1	TWA	10 mg/m3	CA AB OEL
		TWAEV (total dust)	10 mg/m3 (Aluminium)	CA QC OEL
		TWA (Respirable)	1 mg/m3 (Aluminium)	CA BC OEL
		TWA (Respirable fraction)	1 mg/m3 (Aluminium)	ACGIH
Calcium distearate	1592-23-0	TWA	10 mg/m3	CA AB OEL
		TWA	10 mg/m3	CA BC OEL
		TWA (Inhalable fraction)	10 mg/m3	ACGIH
		TWA (Respirable fraction)	3 mg/m3	ACGIH
Polyvinyl chloride	9002-86-2	TWA (Respirable)	1 mg/m3	CA BC OEL
		TWAEV (total dust)	10 mg/m3	CA QC OEL
		TWA (Respirable fraction)	1 mg/m3	ACGIH
Mica-Group minerals	12001-26-2	TWA (Respirable)	3 mg/m3	CA AB OEL
		TWA (Respirable)	3 mg/m3	CA BC OEL
		TWAEV (respirable dust)	3 mg/m3	CA QC OEL
		TWA (Respirable fraction)	3 mg/m3	ACGIH

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 : If dusty conditions exist, use NIOSH approved respirator with high efficiency (p-100) filter media.

Hand protection
Remarks : Nitrile rubber gloves. Impervious butyl rubber gloves PVC

		Neoprene gloves
Eye protection	:	Safety glasses with side-shields
Skin and body protection	:	Wear protective clothing, including long sleeves and gloves, to prevent skin contact.
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	:	powder
Colour	:	brown
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 / upper flammability limit	:	not tested.
Lower explosion limit / Lower flammability limit	:	not tested.
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	not available
Density	:	not tested.
Solubility(ies)		
Water solubility	:	not determined

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. Keep away from heat. Keep away from flames and sparks.
Incompatible materials	:	Strong oxidizing agents none Strong acids and oxidizing agents
Hazardous decomposition products	:	When handled and stored appropriately, no dangerous decomposition products are known The product does not contain any chemical groups which suggest self-reactive properties, nor is the estimated SADT less than 75 °C, nor is the exothermic decomposition energy

higher than 300 J/g.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact

Acute toxicity

Product:

Acute inhalation toxicity	:	Acute toxicity estimate: 87.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

Aluminium oxide:

Acute oral toxicity	:	LD50 (Rat, male and female): > 10,000 mg/kg Method: OECD Test Guideline 401 GLP: No information available.
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 2.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Remarks: Not applicable

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity	:	Remarks: not required
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes

C.I. Pigment Brown 24:

Acute oral toxicity	:	LD50 (Rat, male and female): > 10,000 mg/kg Method: BASF test GLP: no
Acute inhalation toxicity	:	Remarks: Not applicable
Acute dermal toxicity	:	Remarks: Not applicable

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

Acute oral toxicity	:	LD50 (Rat, male and female): 2,000 mg/kg Method: OECD Test Guideline 401 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

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 Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: no Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Assessment: The substance or mixture has no acute dermal toxicity Remarks: not required

Polyvinyl chloride:

Acute oral toxicity	:	Remarks: Not relevant
Acute inhalation toxicity	:	Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Remarks: Not relevant

Skin corrosion/irritation

Product:

Result: No skin irritation

Components:

Aluminium oxide:

Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: No information available.

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

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

C.I. Pigment Brown 24:

Species: Rabbit
Exposure time: 24 h
Method: Draize Test
Result: No skin irritation
GLP: no

C.I. Pigment White 6:

Species: Rabbit
Exposure time: 4 h

Method: OECD Test Guideline 404
Result: No skin irritation
GLP: no

Polyvinyl chloride:

Remarks: This information is not available.

Serious eye damage/eye irritation

Product:

Result: No eye irritation

Components:

Aluminium oxide:

Result: Mild eye irritation

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Species: Rabbit
Result: No eye irritation
Exposure time: 24 h
Method: OECD Test Guideline 405
GLP: yes

C.I. Pigment Brown 24:

Species: rabbit eye
Result: slight irritation
Method: FDA guideline
GLP: no

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

Species: rabbit eye
Result: non-irritant
Exposure time: 96 h
Method: OECD Test Guideline 405
GLP: yes

C.I. Pigment White 6:

Species: rabbit eye
Result: No eye irritation

Method: OECD Test Guideline 405
GLP: No information available.

Polyvinyl chloride:

Remarks: This information is not available.

Respiratory or skin sensitisation

Product:

Result: Causes sensitisation.

Components:

Aluminium oxide:

Test Type: Draize Test
Exposure routes: Dermal
Species: Guinea pig
Method: Draize Test
Result: Not a skin sensitizer.
GLP: no

Test Type: Respiratory system
Exposure routes: inhalation (dust/mist/fume)
Species: Mouse
Method: Other
Result: Not a skin sensitizer.
GLP: no

Calcium distearate:

Test Type: Local lymph node assay (LLNA)
Exposure routes: Dermal
Species: Mouse
Method: OECD Test Guideline 429
Result: Not a skin sensitizer.
GLP: yes
Remarks: By analogy with a product of similar composition

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Test Type: Local lymph node assay (LLNA)
Exposure routes: Dermal
Species: Mouse
Method: OECD Test Guideline 429
Result: Not a skin sensitizer.
GLP: yes

C.I. Pigment Brown 24:

Remarks: Not applicable

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

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

C.I. Pigment White 6:

Test Type: Local lymph node assay (LLNA)
Exposure routes: Dermal
Species: Mouse
Method: OECD Test Guideline 429
Result: Not a skin sensitizer.
GLP: No information available.

Test Type: Buehler Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
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.

Polyvinyl chloride:

Exposure routes: Skin contact
Result: not known

Germ cell mutagenicity

Components:

Aluminium oxide:

Genotoxicity in vitro : Test Type: In vitro gene mutation study in mammalian cells
Test system: mouse lymphoma cells
Concentration: 6,1 - 780 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: By analogy with a product of similar composition

Genotoxicity in vivo : Test Type: Chromosome Aberration Test
Species: Rat (female)
Strain: wistar
Cell type: Bone marrow
Application Route: oral (gavage)
Exposure time: Single exposure
Dose: 500 - 1000 - 2000 mg/kg
Method: OECD Test Guideline 475
Result: positive
GLP: No information available.

Test Type: Micronucleus test
Species: Rat (female)
Strain: wistar
Cell type: Bone marrow
Application Route: oral (gavage)
Exposure time: Single exposure
Dose: 500 - 1000 - 2000 mg/kg
Method: OECD Test Guideline 474
Result: positive
GLP: No information available.

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Calcium distearate:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro gene mutation study in mammalian cells
Test system: 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
Test system: 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.

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 4 - 10000 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 lung cells
Concentration: 0,3 - 35 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Concentration: 4,4 - 560 µf/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

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

C.I. Pigment Brown 24:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 100 - 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Ames test
Test system: Escherichia coli
Concentration: 2,5 - 5000 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 lung cells
Concentration: 0,5 - 900 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: yes

Test Type: In vitro gene mutation study in mammalian cells

Test system: mouse lymphoma cells
Concentration: 3,13 - 100 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

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

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

Genotoxicity in vitro : Test Type: In vitro gene mutation study in mammalian cells
Test system: mouse lymphoma cells
Concentration: 0,006 - 100 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 150 - 12150 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no

Genotoxicity in vivo : Test Type: Chromosome Aberration Test
Species: Mouse (male and female)
Cell type: Bone marrow cells
Application Route: oral (gavage)
Exposure time: 30 h
Dose: 2250 - 4500 - 9000 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.
Test substance: other TS

Test Type: Chromosome Aberration Test
Species: Mouse (male and female)
Strain: CD1
Cell type: Bone marrow cells
Application Route: oral (gavage)
Exposure time: 72 h
Dose: 2250 - 4500 - 9000 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: No information available.
Test substance: other TS

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
Test system: 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
Test system: 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 : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Polyvinyl chloride:

Genotoxicity in vitro : Remarks: Not applicable

Germ cell mutagenicity - Assessment : No information available.

Carcinogenicity

Components:

Aluminium oxide:

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

Calcium distearate:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

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

C.I. Pigment Brown 24:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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

Carcinogenicity - Assessment : No information available.

C.I. Pigment White 6:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Polyvinyl chloride:

Carcinogenicity - Assessment : No information available.

Reproductive toxicity

Components:

Aluminium oxide:

Effects on fertility : Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: Drinking water
Dose: 57 - 189 - 567 mg/kg
General Toxicity - Parent: NOAEL: ca. 567 mg/kg body weight
General Toxicity F1: NOAEL: ca. 57 mg/kg body weight
Method: Other
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development : Species: Rat
Strain: wistar
Application Route: oral (gavage)
Dose: 126 - 251 - 503 mg/kg
Frequency of Treatment: 2 daily
General Toxicity Maternal: NOAEL: > 100 mg/kg body weight
Teratogenicity: NOAEL: 503 mg/kg body weight
Method: OECD Test Guideline 414
GLP: No information available.
Remarks: By analogy with a product of similar composition

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

Calcium distearate:

Effects on fertility	:	Species: Rat Application Route: Oral General Toxicity - Parent: NOAEL: > 1,000 mg/kg body weight General Toxicity F1: NOAEL: > 1,000 mg/kg body weight Method: OECD Test Guideline 421 GLP: yes
Effects on foetal development	:	Species: Rat Application Route: Oral Teratogenicity: NOAEL: > 1,000 mg/kg body weight 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.

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Effects on fertility	:	Test Type: One generation study Species: Rat, male and female Strain: Sprague-Dawley Application Route: oral (gavage) Dose: 10 - 100 - 1000 mg/kg Duration of Single Treatment: > 52 d Frequency of Treatment: 1 daily General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight General Toxicity F1: NOAEL: 1,000 mg/kg body weight Method: OECD Test Guideline 421 GLP: yes
Effects on foetal development	:	Test Type: Pre-natal Species: Rat, female Strain: Sprague-Dawley Application Route: oral (gavage) Dose: 50 - 250 - 1000 mg/kg Duration of Single Treatment: 13 d Frequency of Treatment: 1 daily General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight Teratogenicity: NOAEL: > 1,000 mg/kg body weight Developmental Toxicity: NOAEL: > 1,000 mg/kg body weight 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.

C.I. Pigment Brown 24:

Effects on fertility	:	Test Type: One generation study

Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (gavage)
Dose: 250 - 500 - 1000 mg/kg
General Toxicity - Parent: NOAEL: >= 1,000 mg/kg body weight
General Toxicity F1: NOAEL: >= 1,000 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes

Effects on foetal development : Species: Rat
Strain: Sprague-Dawley
Application Route: oral (gavage)
Dose: 250 - 500 - 1000 mg/kg
General Toxicity Maternal: NOAEL: >= 1,000 mg/kg body weight
Teratogenicity: NOAEL: >= 1,000 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes

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

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

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (feed)
Dose: 20 - 60 -200 ppm
General Toxicity - Parent: NOAEL: ca. 1.6 mg/kg body weight
General Toxicity F1: NOAEL: 1.6 mg/kg body weight
Method: OECD Test Guideline 416
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development : Species: Rabbit
Strain: New Zealand white
Application Route: oral (gavage)
Dose: 4 - 20 - 80 mg/kg
General Toxicity Maternal: NOAEL: 20 mg/kg body weight
Teratogenicity: NOAEL: 80 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.
Classification as "teratogenic" is not justifiable.

C.I. Pigment White 6:

Effects on fertility : Remarks: no data available

Effects on foetal : Test Type: Pre-natal

development		Species: Rat, female Strain: wistar Application Route: oral (gavage) Dose: 100, 300, 1000 mg/kg bw Duration of Single Treatment: 14 d Frequency of Treatment: 1 daily General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight Developmental Toxicity: NOAEL: 1,000 mg/kg body weight Embryo-foetal toxicity: NOEL: 1,000 mg/kg body weight Method: OECD Test Guideline 414 GLP: yes Remarks: No significant adverse effects were reported
Reproductive toxicity - Assessment	:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Did not show teratogenic effects in animal experiments.

Polyvinyl chloride:

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.

STOT - single exposure

Components:

Aluminium oxide:

Target Organs: Lungs
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Calcium distearate:

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

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

C.I. Pigment Brown 24:

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

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

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.

Polyvinyl chloride:

Remarks: no data available

STOT - repeated exposure

Components:

Aluminium oxide:

Target Organs: Lungs
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Calcium distearate:

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

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

C.I. Pigment Brown 24:

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

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

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

C.I. Pigment White 6:

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

Polyvinyl chloride:

Remarks: no data available

Repeated dose toxicity

Components:

Aluminium oxide:

Species: Rat, male and female
NOAEL: 57 mg/kg

Application Route: Drinking water
Exposure time: 1 a
Number of exposures: continuously
Dose: 57 - 189 - 567 mg/kg
Group: yes
Method: OECD Test Guideline 426
GLP: yes
Remarks: By analogy with a product of similar composition

Species: Rat
LOAEL: 0.070 mg/l
Application Route: Inhalation
Exposure time: 6 m
Number of exposures: 6 hr/day; 5 days a week
Dose: 15-30-50-70-100 mg Al/m3
Method: OECD Test Guideline 413
GLP: No information available.

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

Calcium distearate:

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Species: Rat, male and female
NOAEL: 1000 mg/kg bw/day
Application Route: oral (gavage)
Exposure time: > 70 d
Number of exposures: once daily
Dose: 10 - 100 -1000 mg/kg
Group: yes
Method: OECD Test Guideline 422
GLP: yes

C.I. Pigment Brown 24:

Species: Rat, male and female
NOAEL: 500 mg/kg
Application Route: oral (feed)
Exposure time: 90 d
Number of exposures: daily
Dose: 0,5 - 5 - 50 - 500 mg/kg
Group: yes
Method: OECD Test Guideline 408
GLP: No information available.

Application Route: Inhalation
Remarks: not tested.

Application Route: Skin contact
Remarks: not tested.

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

Species: Rat, male and female
NOAEL: 0.5 mg/kg
Application Route: oral (feed)
Exposure time: 90 d
Number of exposures: daily
Dose: 10-25-50-100-250-500-1000 ppm
Group: yes
Method: OECD Test Guideline 408
GLP: no

C.I. Pigment White 6:

Species: Rat, male
NOEL: > 24000 mg/kg bw/day
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

Polyvinyl chloride:

Remarks: This information is not available.

Aspiration toxicity

Components:

Aluminium oxide:

No aspiration toxicity classification

Calcium distearate:

No aspiration toxicity classification

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

No aspiration toxicity classification

C.I. Pigment Brown 24:

No aspiration toxicity classification

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

No aspiration toxicity classification

C.I. Pigment White 6:

No aspiration toxicity classification

Polyvinyl chloride:

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:

Aluminium oxide:

Toxicity to fish : NOEC (Salmo trutta (brown trout)): > 0.072 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates	:	NOEC (Daphnia magna (Water flea)): > 0.071 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): >= 0.052 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes EC50 (Pseudokirchneriella subcapitata (green algae)): 1.05 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: By analogy with a product of similar composition
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 56.48 mg/l Exposure time: 7 d Test Type: semi-static test Analytical monitoring: yes Method: Other GLP: yes Remarks: By analogy with a product of similar composition
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.076 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: By analogy with a product of similar composition
Toxicity to microorganisms	:	Remarks: Not applicable
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial	:	Remarks: Not applicable

organisms

Ecotoxicology Assessment

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

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/aquatic plants	:	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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 10 g/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: no 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	:	EC50 (Daphnia magna (Water flea)): > 10 g/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: no Method: OECD Test Guideline 202 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 320 mg/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 details of the toxic effect relate to the nominal concentration. ErC10 (Desmodesmus subspicatus (green algae)): > 320 mg/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 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)	:	NOELR (Daphnia magna (Water flea)): 100 mg/l End point: Reproduction rate Exposure time: 21 d Test Type: semi-static test Analytical monitoring: no

Method: OECD Test Guideline 211
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to microorganisms : EC50 (activated sludge): > 10 g/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: Respiration inhibition
Analytical monitoring: no
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 (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)): 1,000 mg/kg
Exposure time: 14 d
End point: mortality
Method: OECD Test Guideline 207
GLP: yes

C.I. Pigment Brown 24:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 T.15
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)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no

Method: OECD Test Guideline 201
GLP: 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 microorganisms	:	EC50 (Pseudomonas putida): > 10,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 0.5 h Test Type: aquatic Analytical monitoring: no Method: DIN 38412 T.27 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

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

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 24 mg/l Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.17 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 0.17 mg/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

NOEC (Desmodesmus subspicatus (green algae)): 0.04 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.286 mg/l
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 211
GLP: yes

M-Factor (Chronic aquatic toxicity) : 1

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 organisms : Remarks: Not applicable

Plant toxicity : Remarks: Not applicable

Sediment toxicity : Remarks: Not applicable

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/aquatic plants : 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 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: >= 10 %
Exposure time: 20 h
End point: Growth
Species: Lactuca sativa (lettuce)
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 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 Method: Other GLP: yes

Polyvinyl chloride:

Toxicity to fish	:	no toxicity, except ingestion Remarks: Not applicable
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: Not applicable
Toxicity to algae/aquatic plants	:	Remarks: Not applicable
Toxicity to fish (Chronic toxicity)	:	no toxicity, except ingestion Remarks: Not applicable
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: Not applicable
Toxicity to microorganisms	:	Remarks: Not applicable
Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: Not applicable
Toxicity to terrestrial organisms	:	no toxicity, except ingestion Remarks: Not applicable

Persistence and degradability

Components:

Aluminium oxide:

Biodegradability : Remarks: Not applicable

Calcium distearate:

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

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 4 mg/l
Biochemical Oxygen Demand (BOD)
Result: Not readily biodegradable.
Biodegradation: 54 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

Stability in water : Remarks: Not applicable

C.I. Pigment Brown 24:

Biodegradability : Remarks: Not applicable for inorganic compound.

Physico-chemical removability : Remarks: Inorganic product, cannot be eliminated from the water by biological purification processes.

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

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 50 mg/l
Biochemical Oxygen Demand (BOD)
Result: Not readily biodegradable.
Biodegradation: 30 - 40 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

C.I. Pigment White 6:

Biodegradability : Remarks: Not applicable for inorganic compound.

Polyvinyl chloride:

Biodegradability : Result: Not readily biodegradable.
Remarks: The polymer is too large to be bioavailable.

Not applicable due to insolubility in water. This product does not come into contact with the effluent when it is used for its purpose, otherwise it can be removed by filtration operations.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

Aluminium oxide:

Bioaccumulation : Remarks: Not applicable

Calcium distearate:

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

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Partition coefficient: n-octanol/water : log Pow: 0.9 (20 °C)
pH: 7
Method: other (calculated)

C.I. Pigment Brown 24:

Bioaccumulation : Remarks: Not relevant for inorganic substances

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

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

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.

Partition coefficient: n-octanol/water : Remarks: inorganic

Polyvinyl chloride:

Bioaccumulation : Remarks: Not applicable

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not tested.

Components:

Aluminium oxide:

Distribution among environmental compartments : Remarks: Not applicable

C.I. Pigment Brown 24:

Distribution among environmental compartments : Remarks: Not applicable

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

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

Polyvinyl chloride:

Distribution among environmental compartments : Remarks: The product is insoluble and sinks in water.

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:

Aluminium oxide:

Environmental fate and pathways : not available

Results of PBT and vPvB assessment	:	Remarks: Not applicable
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.

Reaction mass of fatty acids, montan wax and fatty acids, montan wax, ethylene acids and montan wax:

Environmental fate and pathways	:	not available
Results of PBT and vPvB assessment	:	The substance is not identified as a PBT or as a vPvB substance.
Additional ecological information	:	The product should not be allowed to enter drains, water courses or the soil.

C.I. Pigment Brown 24:

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.

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

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.

C.I. Pigment White 6:

Environmental fate and	:	not available

pathways

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.

Polyvinyl chloride:

Environmental fate and pathways	:	no data available
Results of PBT and vPvB assessment	:	Remarks: Not applicable
Additional ecological information	:	Has not been tested due to insolubility in 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

NPRI Components	:	Chromium (III) compound Antimony compounds Manganese Compound

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

DSL	:	All components of this product are on the Canadian DSL

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA QC OEL / TWAEV	:	Time-weighted average exposure value

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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