SAFETY DATA SHEET

PVC PVC 004.000% NOVO WHITE 555

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SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Plastics & Coatings Canada Inc. 2 Lone Oak Court Toronto, Ontario, M9C 5R9 Telephone No.: +1 514-832-2559 **Information of the substance/preparation:** Product Stewardship, +1-704-331-7710 e-mail: SDS.NORAM@clariant.com **Emergency tel. number:** +1 CANUTEC (613) 996-6666

Trade name:	**PVC PVC 004.000% NOVO WHITE 555**
Material number:	CV02765619
Synonyms:	01VRV-334
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

Components

Chemical name	CAS-No.	Concentration (% w/w)
Aluminium oxide	1344-28-1	0.1 - 1
Amorphous silicon dioxide	7631-86-9	0.1 - 1
Calcium distearate	1592-23-0	1 - 5
Calcium carbonate	471-34-1	1 - 5
Di-n-octyltin-bis-(2-ethylhexylthioglycolate)	15571-58-1	1 - 5
C.I. Pigment White 6	13463-67-7	30 - 60

Polyvinyl chloride	9002-86-2	30 - 60

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 : In case of fire hazardous decomposition products may be

firefighting		produced such as: Hydrogen chloride Carbon monoxide Carbon dioxide (CO2) Sulphur oxides Hydrogen sulfide (H2S) 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	:	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.

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 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 particulate matter)	1 mg/m3 (Aluminium)	ACGIH
Amorphous silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
Calcium distearate	1592-23-0	TWA	10 mg/m3	CA AB OEL
		TWA	10 mg/m3	CA BC OEL
		TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
		TWA	3 mg/m3	ACGIH

		(Respirable particulate matter)		
Polyvinyl chloride	9002-86-2	TWA (Respirable)	1 mg/m3	CA BC OEL
		TWAEV (total dust)	10 mg/m3	CA QC OEL
		TWA (Respirable particulate matter)	1 mg/m3	ACGIH
Calcium carbonate	471-34-1	TWAEV (total dust)	10 mg/m3	CA QC OEL

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 / 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	:	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 strong bases Strong acids Strong acids and oxidizing agents
Hazardous decomposition products	:	No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

None known.

Acute toxicity

Product:

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

Amorphous silicon dioxide:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Remarks: No significant adverse effects were reported

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.08 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 : LD50 (Rabbit): > 5,000 mg/kg
Method: Other
GLP: no

Calcium distearate:

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

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

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.

Amorphous silicon dioxide:

Species: Rabbit
Exposure time: 4 h
Method: OECD Test Guideline 404
Result: No 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

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

Amorphous silicon dioxide:
Species: Rabbit
Result: No eye irritation
Exposure time: 24 h
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

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: non-sensitizing

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

Amorphous silicon dioxide:

Remarks: no data available

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.

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.

Amorphous silicon dioxide:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 667 - 10000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro gene mutation study in mammalian cells
Test system: Chinese hamster ovary cells
Concentration: 10 - 500 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Concentration: 38 - 1000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Cytogenetic assay
Species: Rat (male)
Strain: Fischer F344
Application Route: Inhalation
Exposure time: 13 w, 6 h/d, 5 d/wk
Dose: ca. 50 mg/m3
Method: Other
Result: negative
GLP: No information available.

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

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.

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.

Amorphous silicon dioxide:

Species: Rat, (male and female)
Application Route: oral (feed)
Exposure time: 103 w
Dose: 1,25 - 2,5 - 5 % in diet
Group: yes
Frequency of Treatment: daily
NOAEL: ca. 1,800 - 3,000 mg/kg bw/day
Method: OECD Test Guideline 453
Result: negative
GLP: No information available.

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Calcium distearate:

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.

Amorphous silicon dioxide:

Effects on fertility : Test Type: One generation study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (feed)
Dose: 497 (m), 509 (f) mg/kg
General Toxicity - Parent: NOAEL: 497 mg/kg body weight
General Toxicity F1: NOAEL: 497 mg/kg body weight
Method: OECD Test Guideline 415
GLP: no

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Strain: wistar
Application Route: oral (gavage)
Dose: 13,5 - 62,7 - 292 - 1350mg/kg
General Toxicity Maternal: NOAEL: 1,350 mg/kg body weight
Teratogenicity: NOAEL: 1,350 mg/kg body weight
Method: OECD Test Guideline 414
GLP: no

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.

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 development	:	Test Type: Pre-natal 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.

Amorphous silicon dioxide:

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.

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.

Amorphous silicon dioxide:

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

Calcium distearate:

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.

Amorphous silicon dioxide:

Species: Rat, male and female
NOAEL: 4000 - 4500 mg/kg bw/day
Application Route: oral (feed)
Exposure time: 13 w
Number of exposures: continuously
Dose: 0,5 - 2 - 6,7 % SI in diet
Group: yes
Method: OECD Test Guideline 408
GLP: yes

Species: Rat, male and female
NOAEL: 1,3 mg/m³
LOAEL: 0.0059 mg/l

Application Route: Inhalation
Exposure time: 13 w
Number of exposures: 6 hr/day; 5 days a week
Dose: 1,3 - 5,9 - 31 mg/m3
Group: yes
Method: OECD Test Guideline 413
GLP: yes

Application Route: Skin contact
Remarks: This information is not available.

Calcium distearate:

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

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

Amorphous silicon dioxide:
No aspiration toxicity classification

Calcium distearate:
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 organisms	:	Remarks: Not applicable

Ecotoxicology Assessment

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

Amorphous silicon dioxide:

Toxicity to fish	:	LL0 (Brachydanio rerio (zebrafish)): 10,000 mg/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	:	EL50 (Daphnia magna (Water flea)): > 1,000 mg/l End point: Immobilization Exposure time: 24 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	:	EL50 (Desmodesmus subspicatus (green algae)): > 10,000 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: By analogy with a product of similar composition The details of the toxic effect relate to the nominal concentration.
Toxicity to fish (Chronic toxicity)	:	NOEC: 86.03 mg/l Exposure time: 30 d Method: Other GLP: no Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 34.223 mg/l Exposure time: 30 d Method: Other GLP: no Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
Sediment toxicity	:	LC50: 148.41 mg/l Duration: 14 d Method: Other GLP: no Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

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

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

Ecotoxicology Assessment

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

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

Amorphous silicon dioxide:

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

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

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

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	:	Remarks: Not applicable

assessment

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

Amorphous silicon dioxide:

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	:	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.

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 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.

Polyvinyl chloride:

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

information

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

SECTION 15. REGULATORY INFORMATION

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
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
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
OSHA Z-3 / TWA	:	8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; 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; 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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