

## RENOL-MOSS GREEN-ZN

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Substance key: 000000722815

Revision Date: 01/09/2018

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Date of printing :01/31/2018

## 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:**

BU Masterbatches  
Product Stewardship, +1-704-331-7710  
e-mail: SDS.NORAM@clariant.com

**Emergency tel. number:** +1 CANUTEC (613) 996-6666**Trade name:****RENOL-MOSS GREEN-ZN****Material number:**

PV62800001

**Chemical family:**

Colourant preparation  
Carrier: EVA

**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: EVA

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
Iron(III)oxide	1309-37-1	3 - 5
C.I. Pigment Brown 24	68186-90-3	7 - 10
C.I. Pigment White 6	13463-67-7	25 - 40

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) and by the Canadian WHMIS 2015 Hazardous Products Regulations (SOR/2015-17)., The hazardous ingredients of this product are encapsulated, therefore the material is not

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GHS classified for health and environmental hazards as exposure is not expected., Any concentration shown as a range is due to batch variation.

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**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.

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**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:  
Acetic acid  
Carbon monoxide

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Carbon dioxide (CO<sub>2</sub>)  
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.  
Metal oxides  
Carbon 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.

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- Conditions for safe storage : Keep container tightly closed in a cool, well-ventilated place.  
Protect from moisture.  
Keep away from direct sunlight.
- Technical measures/Precautions : Store in a cool, dry, well-ventilated area. Keep container sealed when not in use.  
Keep in an area equipped with sprinklers.  
Minimize dust generation and accumulation.
- Materials to avoid : not required

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Iron(III)oxide	1309-37-1	TWA (Respirable)	5 mg/m3	CA AB OEL
		TWA (Fumes)	5 mg/m3 (Iron)	CA BC OEL
		TWA (Dust)	5 mg/m3 (Iron)	CA BC OEL
		STEL (Fumes)	10 mg/m3 (Iron)	CA BC OEL
		TWAEV (fume and dust)	5 mg/m3 (Iron)	CA QC OEL
		TWA (Respirable fraction)	5 mg/m3	ACGIH
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 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

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**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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** : Granules

**Colour** : green

**Odour** : characteristic

**Odour Threshold** : Not applicable

**pH** : Not applicable

**Melting point** : > 50 °C

**Boiling point** : Not applicable

**Flash point** : Not applicable

**Evaporation rate** : Not applicable

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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	:	approx. 1.36 g/cm <sup>3</sup> Value determined from data on raw material.
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	This property is not applicable for mixtures.
Decomposition temperature	:	220 °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	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	To avoid thermal decomposition, do not overheat. Heating can release hazardous gases.

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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 : none  
Strong oxidizing agents  
Halogenated hydrocarbons

Hazardous decomposition products : No hazardous decomposition products if stored and handled as prescribed

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**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

None known.

**Acute toxicity****Product:**

Acute inhalation toxicity : Acute toxicity estimate: 18.29 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

**Components:****Iron(III)oxide:**

Acute oral toxicity : LD50 (Rat, male): > 10,000 mg/kg  
Method: Other  
GLP: No information available.

Acute inhalation toxicity : LC0 (Rat, male): > 0.21 mg/l  
Exposure time: 14 d  
Method: OECD Test Guideline 412  
GLP: yes

Acute dermal toxicity : Remarks: no data available

Acute toxicity (other routes of administration) : LD50 (Rat): 5,550 mg/kg  
Application Route: Intraperitoneal injection

**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

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Acute dermal toxicity : Remarks: Not applicable

**C.I. Pigment White 6:**

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

Acute inhalation toxicity : LC50 (Rat, male and female): 3.4 - 5.1 mg/l  
Exposure time: 4 h  
Method: OECD Test Guideline 403  
GLP: no

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

**Skin corrosion/irritation****Product:**

Result: No skin irritation

**Components:****Iron(III)oxide:**

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

**Serious eye damage/eye irritation****Product:**

Result: No eye irritation



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**Components:****Iron(III)oxide:**

Species: rabbit eye  
Result: No eye irritation  
Exposure time: 192 h  
Method: OECD Test Guideline 405  
GLP: yes

**C.I. Pigment Brown 24:**

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

**C.I. Pigment White 6:**

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

**Respiratory or skin sensitisation****Product:**

Result: non-sensitizing

**Components:****Iron(III)oxide:**

Test Type: Maurer optimisation test  
Exposure routes: Skin contact  
Species: Guinea pig  
Method: Other  
Result: Not a skin sensitizer.  
GLP: No information available.

**C.I. Pigment Brown 24:**

Remarks: Not applicable

**C.I. Pigment White 6:**

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

Test Type: Buehler Test  
Exposure routes: Skin contact  
Species: Guinea pig

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Method: OECD Test Guideline 406

Result: non-sensitizing

GLP: yes

Test Type: Respiratory system

Exposure routes: inhalation (dust/mist/fume)

Species: Mouse

Method: Other

Result: Does not cause respiratory sensitisation.

GLP: No information available.

**Germ cell mutagenicity****Components:****Iron(III)oxide:**

Genotoxicity in vitro

: Test Type: Ames test  
Test system: Salmonella typhimurium  
Concentration: 8 - 5000 µg/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: No information available.  
Remarks: By analogy with a product of similar composition

Test Type: HGPRT assay  
Test system: V79 cells (embryonic lung fibroblasts) of the Chinese hamster  
Concentration: 6 - 36 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

Test Type: Chromosome aberration test in vitro  
Test system: V79 cells (embryonic lung fibroblasts) of the Chinese hamster  
Concentration: 6,25 - 25 µg/ml  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative  
GLP: yes  
Remarks: By analogy with a product of similar composition

Genotoxicity in vivo

: Test Type: Micronucleus test  
Species: Rat (male)  
Strain: Sprague-Dawley  
Application Route: oral (gavage)  
Exposure time: 24 h  
Dose: 3,75 mg/kg  
Method: Other  
Result: negative  
GLP: No information available.

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

**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.

**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

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Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse (male and female)  
Strain: ICR  
Cell type: Erythrocytes  
Application Route: oral (gavage)  
Exposure time: single treatment  
Dose: 500 - 1000 - 2000 mg/kg  
Method: OECD Test Guideline 474  
Result: negative  
GLP: yes

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

**Carcinogenicity****Components:****Iron(III)oxide:**

Species: Rat, (male and female)  
Application Route: oral (gavage)  
Exposure time: 798 d  
Dose: 10 - 40 mg/kg  
Group: yes  
Frequency of Treatment: every other week  
Method: Other  
GLP: No information available.  
Remarks: Based on available data, the classification criteria are not met.

Species: Rat, (male and female)  
Application Route: Intraperitoneal injection  
Exposure time: 790 - 914 d  
Dose: 200 mg/kg  
Group: yes  
Frequency of Treatment: 3 injections; every 8 weeks  
Method: Other  
GLP: No information available.  
Remarks: Based on available data, the classification criteria are not met.

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

**C.I. Pigment Brown 24:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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**C.I. Pigment White 6:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**Reproductive toxicity****Components:****Iron(III)oxide:**

Effects on fertility : Remarks: Not applicable

Effects on foetal development : Remarks: Not applicable

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

**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:  $\geq$  1,000 mg/kg body weight  
General Toxicity F1: NOAEL:  $\geq$  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:  $\geq$  1,000 mg/kg body weight  
Teratogenicity: NOAEL:  $\geq$  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.

**C.I. Pigment White 6:**

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

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

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

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**STOT - single exposure****Components:****Iron(III)oxide:**

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.

**C.I. Pigment White 6:**

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

**STOT - repeated exposure****Components:****Iron(III)oxide:**

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.

**C.I. Pigment White 6:**

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

**Repeated dose toxicity****Components:****Iron(III)oxide:**

Species: Rat, male

Application Route: oral (feed)

Exposure time: 21 d

Number of exposures: daily

Dose: 112,3 - 330,1 mg/100g diet

Group: yes

Method: Repeated Dose Toxicity (subacute study)

GLP: yes

Target Organs: Liver

Remarks: No adverse effect has been observed in chronic toxicity tests.

Species: Rat, male

Application Route: Inhalation

Exposure time: 2 w

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Number of exposures: 6 hours/day, 5 days/week  
Dose: 185,2- 195,7 - 210,2 mg/m<sup>3</sup>  
Group: yes  
Method: OECD Test Guideline 412  
GLP: yes  
Remarks: No adverse effect has been observed in chronic toxicity tests.

Application Route: Skin contact  
Method: Repeated Dose Toxicity (subacute study)  
Remarks: The study is not necessary from a scientific perspective.

**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.

**C.I. Pigment White 6:**

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

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

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

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**Aspiration toxicity****Components:****Iron(III)oxide:**

No aspiration toxicity classification

**C.I. Pigment Brown 24:**

No aspiration toxicity classification

**C.I. Pigment White 6:**

No aspiration toxicity classification

**Experience with human exposure****Product:**

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

**Further information****Components:****C.I. Pigment White 6:**

Remarks: Lung damage possible.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

Toxicity to fish : Remarks: no data available

**Components:****Iron(III)oxide:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): approx. 100,000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Analytical monitoring: no data available  
Method: Umweltbundesamt, 1984  
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



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GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to algae	:	Exposure time: Remarks: no data available
Toxicity to fish (Chronic toxicity)	:	Remarks: not reasonable
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: not reasonable
Toxicity to microorganisms	:	EC50 (activated sludge of a predominantly domestic sewage): > 10,000 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Method: ISO 8192
Toxicity to soil dwelling organisms	:	Remarks: The study is not necessary from a scientific perspective.
Plant toxicity	:	Remarks: The study is not necessary from a scientific perspective.
Sediment toxicity	:	Remarks: The study is not necessary from a scientific perspective.
Toxicity to terrestrial organisms	:	Remarks: The study is not necessary from a scientific perspective.
<b>C.I. Pigment Brown 24:</b>		
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	:	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l

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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

**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

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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 : LC50 (*Daphnia magna* (Water flea)): > 100 mg/l  
aquatic invertebrates

Exposure time: 48 h

Test Type: static test

Analytical monitoring: no data available

Method: OECD Test Guideline 202

GLP: no data available

Remarks: The details of the toxic effect relate to the nominal concentration.

LC50 (*Acartia tonsa*): > 10,000 mg/l

Exposure time: 48 h

Analytical monitoring: no data available

Method: ISO 14669 and PARCOM method

GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (microalgae)): 61 mg/l

End point: Growth rate

Exposure time: 72 h

Test Type: static test

Analytical monitoring: no

Method: EPA

GLP: No information available.

Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 (*Skeletonema costatum* (marine diatom)): > 10,000 mg/l

End point: Growth rate

Exposure time: 72 h

Analytical monitoring: no data available

Method: ISO 10253

GLP: yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to fish (Chronic : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 7.31 mg/l  
toxicity)

Exposure time: 28 d

Test Type: static test

Analytical monitoring: yes

Method: Other

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GLP: No information available.

Remarks: By analogy with a product of similar composition

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

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

NOEC (activated sludge of a predominantly domestic sewage):  $\geq$  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  $\rightarrow$   $\geq$  10 %  
Exposure time: 28 d  
End point: mortality  
Method: ISO 11267  
GLP: no  
Remarks: By analogy with a product of similar composition  
This product does not have any known adverse effect on the soil organisms tested.

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

Sediment toxicity : NOEC (*Hyalella azteca* (Scud)):  $\geq$  100000 %  
Analytical monitoring: no  
Sediment: artificial soil  
Exposure duration: 28 d  
Nominal / Measured: nominal  
Basis for effect: mortality  
Method: Other

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GLP: no

Remarks: By analogy with a product of similar composition

NOEC:  $\geq 14989$  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

Toxicity to terrestrial organisms : Remarks: Not applicable

**Persistence and degradability****Components:****Iron(III)oxide:**

Biodegradability : Remarks: Not applicable for inorganic compound.

Physico-chemical removability : 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.

**C.I. Pigment White 6:**

Biodegradability : Remarks: Not applicable for inorganic compound.

**Bioaccumulative potential****Product:**

Bioaccumulation : Remarks: not tested.

**Components:****Iron(III)oxide:**

Bioaccumulation : Remarks: Does not accumulate in organisms.

**C.I. Pigment Brown 24:**

Bioaccumulation : Remarks: Not relevant for inorganic substances

**C.I. Pigment White 6:**

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)  
Bioconcentration factor (BCF): 20 - 200

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Exposure time: 14 d  
Concentration: 0.1 - 1 mg/l  
Method: Other  
GLP: No information available.  
Remarks: Does not accumulate in organisms.

**Mobility in soil****Product:**

Distribution among environmental compartments : Remarks: not tested.

**Components:****Iron(III)oxide:**

Mobility : Remarks: Known distribution to environmental compartments

Distribution among environmental compartments : Remarks: Not applicable

**C.I. Pigment Brown 24:**

Distribution among environmental compartments : Remarks: Not applicable

**C.I. Pigment White 6:**

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

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

**Other adverse effects****Product:**

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

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

**Components:****Iron(III)oxide:**

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.

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

**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.

**C.I. Pigment White 6:**

Environmental fate and pathways : not available

Results of PBT and vPvB assessment : The substance is inorganic, thus a PBT and vPvB criteria assessment is not applicable according to Annex XIII of Regulation (EC) 1907/2006.

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

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**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.

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**SECTION 14. TRANSPORT INFORMATION**

**TDG** not restricted

**IATA** not restricted

**IMDG** not restricted

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**SECTION 15. REGULATORY INFORMATION**

**NPRI Components** : Chromium (III) compound  
Antimony compounds

**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 BC OEL / STEL : short-term exposure limit  
CA QC OEL / TWA EV : 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



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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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