# SAFETY DATA SHEET

**RENOL-BROWN SB83800049-ZN**



| | |
|---|---|
| Substance key: 000000889199 | Revision Date: 07/26/2021 |
| Version : 1 - 0 / CDN | Date of printing :07/28/2021 |

## SECTION 1. IDENTIFICATION

**Identification of the company:**
Avient Colorants Canada Inc.
2 Lone Oak Court
Toronto, Ontario, M9C 5R9
Telephone No.: +1 514-832-2559

**Information of the substance/preparation:**
Product Stewardship
e-mail: SDS.NORAMMB@Clariant.com

**Emergency tel. number:** +1 CANUTEC (613) 996-6666

**Trade name:** **RENOL-BROWN SB83800049-ZN**
**Material number:** SB83800049

**Chemical family:** Colourant preparation
Carrier: ABS

**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: ABS

**Components**

| Chemical name | Common Name/Synonym | CAS-No. | Concentration (% w/w) |
|---|---|---|---|
| Aluminium oxide | Aluminium oxide | 1344-28-1 | 0.1 - 1 |
| Propylidynetrimethanol | Propylidynetrimethanol | 77-99-6 | 0.1 - 1 |
| Limestone | Limestone | 1317-65-3 | 0.1 - 1 |
| Iron(III)oxide | Iron(III)oxide | 1309-37-1 | 0.1 - 1 |
| C.I. Pigment Brown 24 | antimony compounds | 68186-90-3 | 5 - 10 |
| C.I. Pigment White 6 | C.I. Pigment | 13463-67-7 | 10 - 30 |

| | | | |
|---|---|---|---|
| | White 6 | | |

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.<br>Give oxygen or artificial respiration if needed.<br>Get immediate medical advice/ attention.<br>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.<br>In case of burns apply cold water until pain subsides then seek medical advice.<br>Burns must be treated by a physician.<br>If molten polymer contacts 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.<br>Get medical attention immediately if irritation develops and persists. |
| If swallowed | : | Rinse mouth.<br>Do NOT induce vomiting.<br>Never give anything by mouth to an unconscious person.<br>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).<br>No additional symptoms are known. |
| Notes to physician | : | Treat symptomatically. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Foam<br>Carbon dioxide (CO2)<br>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:<br>Styrene<br>Hydrogen cyanide (hydrocyanic acid)<br>Acrylonitrile<br>Carbon monoxide<br>Carbon dioxide (CO2)<br>Sulphur oxides<br>Metal oxides<br>Nitrogen oxides (NOx) |
| Further information | : | Combustible material<br>In the event of fire and/or explosion do not breathe fumes.<br>During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion<br>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.<br>Do not allow run-off from fire fighting to enter drains or water courses.<br>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.<br>Avoid contact with skin, eyes and clothing.<br>Wash thoroughly after handling. |
| Environmental precautions | : | Do not allow contact with soil, surface or ground water.<br>Prevent product from entering drains. |
| Methods and materials for containment and cleaning up | : | Avoid dust formation.<br>Take measures to prevent the build up of electrostatic charge.<br>Sweep up and shovel into suitable containers for disposal.<br>Take up uncontaminated material and pass on for further processing.<br>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.<br>Use only with adequate ventilation/personal protection.<br>For personal protection see section 8.<br>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 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 |
| 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 |
| Limestone | 1317-65-3 | TWA | 10 mg/m3 | CA AB OEL |
| | | TWAEV | 10 mg/m3 | CA QC OEL |

| | | | | |
|---|---|---|---|---|
| | | (total dust) | | |
| 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 particulate matter) | 5 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 : 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 | : | brown |
| Odour | : | characteristic |
| Odour Threshold | : | Not applicable |
| pH | : | Not applicable |
| Melting point | : | > 90 °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 | : | To the best of our current knowledge, no thermal decomposition of the product is expected if it is processed according to good manufacturing practices.<br>See section 10.4. "Conditions to avoid" |
| 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.<br>Heating can release hazardous gases.<br>Keep away from heat, sparks, open flames, and other sources of ignition.<br>If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.<br>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 oxidizing agents<br>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: 3,535 mg/kg<br>Method: Calculation method |

**Components:**

**Aluminium oxide:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male and female): > 10,000 mg/kg<br>Method: OECD Test Guideline 401<br>GLP: No information available. |

| | | |
|---|---|---|
| Acute inhalation toxicity | : | LC50 (Rat, male and female): > 2.3 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>GLP: yes<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity | : | Remarks: Not applicable |

**Propylidynetrimethanol:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male): 14,700 mg/kg<br>Method: Other |
| Acute dermal toxicity | : | LD50 (Rabbit): > 10,000 mg/kg<br>Method: Other |

**Iron(III)oxide:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, male): > 10,000 mg/kg<br>Method: Other<br>GLP: No information available. |
| Acute inhalation toxicity | : | LC0 (Rat, male): > 0.21 mg/l<br>Exposure time: 14 d<br>Method: OECD Test Guideline 412<br>GLP: yes |
| Acute dermal toxicity | : | Remarks: no data available |
| Acute toxicity (other routes of administration) | : | LD50 (Rat): 5,550 mg/kg<br>Application Route: Intraperitoneal injection |

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

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

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

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat, female): > 5,000 mg/kg<br>Method: OECD Test Guideline 425<br>GLP: no |
| Acute inhalation toxicity | : | LC50 (Rat, male and female): 3.4 - 5.1 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>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

**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.

**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

**Components:**

**Aluminium oxide:**

Result: Mild eye irritation

**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: No eye irritation
Method: OECD Test Guideline 405
GLP: No information 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

**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: 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.

**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

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Test system: mammalian cells
Metabolic activation: without
Method: OECD Test Guideline 473
Result: positive

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.

**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.

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
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

**Carcinogenicity**

**Components:**

**Aluminium oxide:**

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

**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.

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

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**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.

**Propylidynetrimethanol:**

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

**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.<br>No teratogenic effects to be expected. |

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

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: One generation study<br>Species: Rat, male and female<br>Strain: Sprague-Dawley<br>Application Route: oral (gavage)<br>Dose: 250 - 500 - 1000 mg/kg<br>General Toxicity - Parent: NOAEL: >= 1,000 mg/kg body weight<br>General Toxicity F1: NOAEL: >= 1,000 mg/kg body weight<br>Method: OECD Test Guideline 422<br>GLP: yes |
| Effects on foetal development | : | Species: Rat<br>Strain: Sprague-Dawley<br>Application Route: oral (gavage)<br>Dose: 250 - 500 - 1000 mg/kg<br>General Toxicity Maternal: NOAEL: >= 1,000 mg/kg body weight<br>Teratogenicity: NOAEL: >= 1,000 mg/kg body weight<br>Method: OECD Test Guideline 422<br>GLP: yes |
| Reproductive toxicity - Assessment | : | No reproductive toxicity to be expected.<br>No teratogenic effects to be expected. |

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

| | | |
|---|---|---|
| Effects on fertility | : | Remarks: no data available |
| Effects on foetal development | : | Test Type: Pre-natal<br>Species: Rat, female<br>Strain: wistar<br>Application Route: oral (gavage)<br>Dose: 100, 300, 1000 mg/kg bw<br>Duration of Single Treatment: 14 d<br>Frequency of Treatment: 1 daily<br>General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight<br>Developmental Toxicity: NOAEL: 1,000 mg/kg body weight<br>Embryo-foetal toxicity: NOEL: 1,000 mg/kg body weight<br>Method: OECD Test Guideline 414<br>GLP: yes<br>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.<br>Did not show teratogenic effects in animal experiments. |

**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.

**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:**

**Aluminium oxide:**

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

**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:**

**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.

**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
Number of exposures: 6 hours/day, 5 days/week
Dose: 185,2- 195,7 - 210,2 mg/m3
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
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

**Aspiration toxicity**

**Components:**

**Aluminium oxide:**

No aspiration toxicity classification

**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.

## 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<br>Exposure time: 7 d<br>Test Type: semi-static test<br>Analytical monitoring: yes<br>Method: Other<br>GLP: yes<br>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<br>End point: Reproduction rate<br>Exposure time: 21 d<br>Test Type: semi-static test<br>Analytical monitoring: yes<br>Method: OECD Test Guideline 211<br>GLP: yes<br>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. |

**Propylidynetrimethanol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Alburnus alburnus (Bleak)): > 1,000 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Method: Other |
| Toxicity to daphnia and other aquatic invertebrates | : | LC50 (Daphnia magna (Water flea)): 13,000 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Method: Other |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l<br>Exposure time: 72 h<br>Method: Other |

| | | |
|---|---|---|
| Toxicity to fish (Chronic toxicity) | : | Remarks: not required |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): > 1,000 mg/l<br>Exposure time: 21 d<br>Test Type: static test<br>Method: Other |

**Iron(III)oxide:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): approx. 100,000 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Analytical monitoring: no data available<br>Method: Umweltbundesamt, 1984<br>GLP: no<br>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<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: OECD Test Guideline 202<br>GLP: yes<br>Remarks: The details of the toxic effect relate to the nominal concentration. |
| Toxicity to algae/aquatic plants | : | 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<br>End point: Bacteria toxicity (respiration inhibition)<br>Exposure time: 3 h<br>Test Type: aquatic<br>Method: ISO 8192<br>GLP: no |
| 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. |

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

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: DIN 38412 T.15<br>GLP: no<br>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<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: OECD Test Guideline 202<br>GLP: yes<br>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<br>End point: Growth rate<br>Exposure time: 72 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: OECD Test Guideline 201<br>GLP: yes<br>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<br>End point: Bacteria toxicity (respiration inhibition)<br>Exposure time: 0.5 h<br>Test Type: aquatic<br>Analytical monitoring: no<br>Method: DIN 38412 T.27<br>GLP: no<br>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<br>Exposure time: 96 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: EPA<br>GLP: yes<br>Remarks: The details of the toxic effect relate to the nominal concentration.<br><br>LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: OECD Test Guideline 203<br>GLP: No information available.<br>Remarks: The details of the toxic effect relate to the nominal concentration.<br><br>LC50 (Cyprinodon variegatus (sheepshead minnow)): > 10,000 mg/l<br>Exposure time: 96 h<br>Test Type: semi-static test<br>Analytical monitoring: no data available<br>Method: OECD Test Guideline 203<br>GLP: yes<br>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<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: no data available<br>Method: OECD Test Guideline 202<br>GLP: no data available<br>Remarks: The details of the toxic effect relate to the nominal concentration.<br><br>LC50 (Acartia tonsa): > 10,000 mg/l<br>Exposure time: 48 h<br>Analytical monitoring: no data available<br>Method: ISO 14669 and PARCOM method<br>GLP: yes<br>Remarks: The details of the toxic effect relate to the nominal concentration. |

| | | |
|---|---|---|
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (microalgae)): 61 mg/l<br>End point: Growth rate<br>Exposure time: 72 h<br>Test Type: static test<br>Analytical monitoring: no<br>Method: EPA<br>GLP: No information available.<br>Remarks: The details of the toxic effect relate to the nominal concentration.<br><br>EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l<br>End point: Growth rate<br>Exposure time: 72 h<br>Analytical monitoring: no data available<br>Method: ISO 10253<br>GLP: yes<br>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<br>Exposure time: 28 d<br>Test Type: static test<br>Analytical monitoring: yes<br>Method: Other<br>GLP: No information available.<br>Remarks: By analogy with a product of similar composition |
| Toxicity to microorganisms | : | EC50 (activated sludge of a predominantly domestic sewage): > 1,000 mg/l<br>End point: Bacteria toxicity (respiration inhibition)<br>Exposure time: 3 h<br>Test Type: aquatic<br>Method: OECD Test Guideline 209<br>GLP: yes<br>Remarks: The details of the toxic effect relate to the nominal concentration.<br><br>NOEC (activated sludge of a predominantly domestic sewage): >= 1,000 mg/l<br>End point: Bacteria toxicity (respiration inhibition)<br>Exposure time: 3 h<br>Test Type: aquatic<br>Method: OECD Test Guideline 209<br>GLP: yes<br>Remarks: The details of the toxic effect relate to the nominal concentration. |
| Toxicity to soil dwelling organisms | : | Test Type: artificial soil<br>NOEC (Folsomia candida): 0,1 ->= 10 %<br>Exposure time: 28 d<br>End point: mortality<br>Method: ISO 11267<br>GLP: no<br>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.

**Persistence and degradability**

**Components:**

**Aluminium oxide:**

Biodegradability : Remarks: Not applicable

**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 : Remarks: Inorganic product, cannot be eliminated from the

| | | |
|---|---|---|
| removability | | 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:**

**Aluminium oxide:**

| | | |
|---|---|---|
| Bioaccumulation | : | Remarks: Not applicable |

**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)<br>Bioconcentration factor (BCF): 20 - 200<br>Exposure time: 14 d<br>Concentration: 0.1 - 1 mg/l<br>Method: Other<br>GLP: No information available.<br>Remarks: Does not accumulate in organisms. |
| Partition coefficient: n-octanol/water | : | Remarks: inorganic |

**Mobility in soil**

**Product:**

| | | |
|---|---|---|
| Distribution among environmental compartments | : | Remarks: not tested. |

**Components:**

**Aluminium oxide:**

| | | |
|---|---|---|
| Distribution among environmental compartments | : | Remarks: Not applicable |

**Iron(III)oxide:**

| | | |
|---|---|---|
| Mobility | : | Remarks: Known distribution to environmental compartments |
| Distribution among | : | Remarks: Not applicable |

environmental compartments

**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:**

**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.

**Iron(III)oxide:**

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.

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

Environmental fate and pathways : not available

Results of PBT and vPvB : The substance is inorganic, thus a PBT and vPvB criteria

| | | |
|---|---|---|
| assessment | | 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 | : | This substance is not considered to be persistent, bioaccumulating and toxic (PBT). |
| Additional ecological information | : | Do not allow to enter ground water, waterways or waste water. |

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| 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

**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 / TWAEV | : | Time-weighted average exposure value |

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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

| | | |
|---|---|---|
| Revision Date | : | 07/26/2021 |
| Date format | : | mm/dd/yyyy |

herein. Final determination of suitability of the Avient product is the sole responsibility of the user. Any material may present unknown hazards and should be used with caution. Due to possible changes in Avient products and applicable national and international regulations and laws, the status of the products could change. Although certain hazards are described herein, Avient and its subsidiaries and affiliates cannot guarantee that these are the only hazards that exist. This information is only valid for the current intended use, and is not valid for such Avient product used in conjunction with any other materials or in any process.

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