

SAFETY DATA SHEET



RENOL-MIDNIGHT BLUE-ZN

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Substance key: 000000813068

Revision Date: 09/19/2020

Version : 1 - 1 / CDN

Date of printing :01/22/2021

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-MIDNIGHT BLUE-ZN

Material number: SB54800026

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	CAS-No.	Concentration (% w/w)
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl derivs.	68411-06-3	0.1 - 1
N,N'-Ethylenedi(stearamide)	110-30-5	1 - 5
C.I. Pigment Blue 15:1	147-14-8	1 - 5
C.I. Pigment Black 7	1333-86-4	1 - 5
C.I. Pigment White 6	13463-67-7	1 - 5

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

SECTION 4. FIRST AID MEASURES

- | | | |
|-------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If inhaled | : | Move the victim to fresh air.
Give oxygen or artificial respiration if needed.
Get immediate medical advice/ attention.
Never give anything by mouth to an unconscious person. |
| In case of skin contact | : | Wash off immediately with plenty of water for at least 15 minutes.
In case of burns apply cold water until pain subsides then seek medical advice.
Burns must be treated by a physician.
If molten polymer contact the skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical attention for thermal burn. Skin absorption of reground pellets is unlikely. |
| In case of eye contact | : | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention immediately if irritation develops and persists. |
| If swallowed | : | Rinse mouth.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Get medical advice/ attention. |
| Most important symptoms and effects, both acute and delayed | : | The possible symptoms known are those derived from the labelling (see section 2).
No additional symptoms are known. |
| Notes to physician | : | Treat symptomatically. |

SECTION 5. FIREFIGHTING MEASURES

- | | | |
|--------------------------------------|---|---------------------------------------------------------------------------|
| Suitable extinguishing media | : | Water spray
Foam
Carbon dioxide (CO2)
Dry chemical |
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during firefighting | : | In case of fire hazardous decomposition products may be produced such as: |

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Styrene
Hydrogen cyanide (hydrocyanic acid)
Acrylonitrile
Carbon monoxide
Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
Take measures to prevent the build up of electrostatic charge.
Dust can form an explosive mixture in air.
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.
Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
Sulphur oxides
Hydrogen sulfide (H₂S)

- 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.

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- 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
N,N'-Ethylenedi(stearamide)	110-30-5	TWA	10 mg/m3	CA AB OEL
		TWA	10 mg/m3	CA BC OEL
		TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
		TWA (Respirable particulate matter)	3 mg/m3	ACGIH
C.I. Pigment Blue 15:1	147-14-8	TWA	1 mg/m3 (Copper)	NIOSH REL
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl derivs.	68411-06-3	TWA	1 mg/m3 (Copper)	NIOSH REL
C.I. Pigment Black 7	1333-86-4	TWA	3.5 mg/m3	CA AB OEL
		TWA (Inhalable)	3 mg/m3	CA BC OEL
		TWAEV	3.5 mg/m3	CA QC OEL
		TWA (Inhalable)	3 mg/m3	ACGIH

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		particulate matter)		
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

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 : blue

Odour : characteristic

Odour Threshold : Not applicable

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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. 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

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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.
Keep away from heat, sparks, open flames, and other sources of ignition.
If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Keep away from heat and sources of ignition.

Incompatible materials : none
no data available
None.
Strong acids and strong bases
Strong oxidizing agents
Strong acids and oxidizing agents

Hazardous decomposition products : Stable under recommended storage conditions.
No hazardous decomposition products if stored and handled as prescribed
No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

None known.

Acute toxicity

Product:

Acute dermal toxicity : Acute toxicity estimate: 2,974 mg/kg
Method: Calculation method

Components:

N,N'-Ethylenedi(stearamide):

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401

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Acute inhalation toxicity : LC50 (Rat, male and female): > 6.3 mg/l
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402

C.I. Pigment Blue 15:1:

Acute oral toxicity : LD50 (Rat, male and female): > 6,400 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : LD50 (Rat, male): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: no

Acute toxicity (other routes of administration) : LD50 (Mouse, male and female): > 2,000 mg/kg
Application Route: Intraperitoneal injection
Method: internal test
Test substance: other TS
GLP: no

C.I. Pigment Black 7:

Acute oral toxicity : LD50 (Rat, male and female): > 10,000 mg/kg
Method: OECD Test Guideline 401
GLP: no
Remarks: No significant adverse effects were reported

Acute inhalation toxicity : LC0 (Rat): > 0.0046 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: No information available.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Remarks: not required

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

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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:

N,N'-Ethylenedi(stearamide):

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

C.I. Pigment Blue 15:1:

Species: Rabbit

Exposure time: 20 h

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: no

C.I. Pigment Black 7:

Species: Rabbit

Exposure time: 4 - 24 h

Method: OECD Test Guideline 404

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:

N,N'-Ethylenedi(stearamide):

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

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C.I. Pigment Blue 15:1:

Species: Rabbit

Result: No eye irritation

Exposure time: 24 h

Method: OECD Test Guideline 405

GLP: no

C.I. Pigment Black 7:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

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:

N,N'-Ethylenedi(stearamide):

Species: Mouse

Method: OECD Test Guideline 429

Result: Not a skin sensitizer.

C.I. Pigment Blue 15:1:

Test Type: Local lymph node assay (LLNA)

Exposure routes: Dermal

Species: Mouse

Method: OECD Test Guideline 429

Result: Not a skin sensitizer.

GLP: yes

Test Type: Maximisation Test

Exposure routes: Dermal

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Not a skin sensitizer.

GLP: yes

C.I. Pigment Black 7:

Test Type: Buehler Test

Exposure routes: Skin contact

Species: Guinea pig

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Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
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.

Germ cell mutagenicity

Components:

N,N'-Ethylenedi(stearamide):

Genotoxicity in vitro : 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: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: Mammalian cell gene mutation assay
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

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

C.I. Pigment Blue 15:1:

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- Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 20 - 10000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no
- Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 25 - 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: No information available.
- Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster cells
Concentration: 750 - 3000 µg/ml
Metabolic activation: with and without metabolic activation
Method: Other
Result: negative
GLP: No information available.
- Test Type: In vitro mammalian cell gene mutation test
Test system: rat hepatocytes
Method: OECD Test Guideline 482
Result: negative
GLP: yes
- Genotoxicity in vivo : Test Type: in vivo assay
Species: Mouse (male and female)
Strain: C57BL/6 x DBA/2
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 484
Result: negative
GLP: No information available.
- Test Type: Micronucleus test
Species: Hamster (male and female)
Cell type: Bone marrow cells
Application Route: oral (gavage)
Exposure time: 48 h
Dose: 1250 - 2500 - 5000 mg/kg
Method: Other
Result: negative
GLP: No information available.
- Germ cell mutagenicity - Assessment : In vivo tests did not show mutagenic effects, In vitro tests did not show mutagenic effects
- C.I. Pigment Black 7:**
- Genotoxicity in vitro : Test Type: Ames test

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Test system: Salmonella typhimurium
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: Rodent cell line
Metabolic activation: without
Method: OECD Test Guideline 476
Result: positive
GLP: No information available.

Test Type: Micronucleus test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: yes

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

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

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Carcinogenicity

Components:

N,N'-Ethylenedi(stearamide):

Carcinogenicity - : No information available.
Assessment

C.I. Pigment Blue 15:1:

Carcinogenicity - : No information available.
Assessment

C.I. Pigment Black 7:

Remarks: Carbon Black should not be classified for carcinogenicity according to the criteria of the Globally Harmonized System of Classification and Labelling of Chemicals. Human health studies show that exposure to carbon black does not increase the risk of carcinogenicity. Studies in laboratory animals show that lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rat tumors are a result of a secondary non-genotoxic mechanism associated with the phenomenon of lung overload. This is a species-specific mechanism that has questionable relevance for classification in humans. Thus a carcinogenicity classification for Carbon Black is not warranted.

Carcinogenicity - : Not classifiable as a human carcinogen.
Assessment

C.I. Pigment White 6:

Carcinogenicity - : Not classifiable as a human carcinogen.
Assessment

Reproductive toxicity

Components:

N,N'-Ethylenedi(stearamide):

Effects on foetal : Test Type: Pre-natal
development : Species: Rat
Strain: Sprague-Dawley
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: >= 1,000 mg/kg body
weight
Method: OECD Test Guideline 414

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

C.I. Pigment Blue 15:1:

Effects on fertility : Test Type: One generation study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (gavage)

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Dose: 0, 40, 200, 1000 mg/kg bw/day
Duration of Single Treatment: > 46 d
General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight
General Toxicity F1: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Strain: Sprague-Dawley
Application Route: oral (gavage)
Dose: 40, 200, 1000 mg/kg bw/day
Duration of Single Treatment: > 46 d
General Toxicity Maternal: NOAEL: 1,000 mg/kg body weight
Teratogenicity: NOAEL: 1,000 mg/kg body weight
Developmental Toxicity: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes

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

C.I. Pigment Black 7:

Effects on foetal development : Test Type: Pre-natal
Species: Rabbit, male and female
Strain: New Zealand white
Application Route: Inhalation
Dose: 10% diesel exhaust emission
Duration of Single Treatment: 12 d
Method: OECD Test Guideline 414
Result: No effects on fertility and early embryonic development were detected.
GLP: no
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.

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

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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.

STOT - single exposure

Components:

N,N'-Ethylenedi(stearamide):

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

C.I. Pigment Blue 15:1:

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

C.I. Pigment Black 7:

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:

N,N'-Ethylenedi(stearamide):

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

C.I. Pigment Blue 15:1:

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

C.I. Pigment Black 7:

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.

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Repeated dose toxicity

Components:

N,N'-Ethylenedi(stearamide):

Species: Rat, male and female

NOEL: ≥ 1000 mg/kg bw/day

Application Route: oral (gavage)

Method: OECD Test Guideline 408

C.I. Pigment Blue 15:1:

Species: Rat, male and female

NOAEL: ca. 4500 mg/kg bw/day

Application Route: oral (feed)

Exposure time: 90 d

Number of exposures: daily

Dose: 0, 0.3, 0.6, 1.25, 2.5 and 5 %

Group: yes

Method: OECD Test Guideline 408

GLP: no

C.I. Pigment Black 7:

Species: Rat, female

NOAEL: 52 mg/kg bw/day

Application Route: oral (feed)

Exposure time: 1 a - 2 a

Number of exposures: daily

Dose: 2,05 g/kg of chow diet

Group: yes

Method: Other

GLP: No information available.

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

Species: Rat, male

NOAEL: 0.0011 mg/l

LOAEL: 0.0071 mg/l

Application Route: Inhalation

Test atmosphere: dust/mist

Exposure time: 13 w

Number of exposures: 6 h per day; 5 d per week

Dose: 1,1 - 7,1 - 52,8 mg/m³

Group: yes

Method: Other

GLP: No information available.

Species: Mouse, male and female

Application Route: Skin contact

Exposure time: 12-18 m

Number of exposures: 3 times per week

Dose: 20% carbon black suspensions

Group: yes

Method: Other

GLP: no

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

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:

N,N'-Ethylenedi(stearamide):

no data available

C.I. Pigment Blue 15:1:

No aspiration toxicity classification

C.I. Pigment Black 7:

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 Blue 15:1:

Test Type: adsorption

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Remarks: Not applicable

C.I. Pigment White 6:

Remarks: Lung damage possible.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: no data available

Components:

N,N'-Ethylenedi(stearamide):

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 0.027 mg/l
End point: mortality
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0022 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (algae)): 0.053 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

Toxicity to fish (Chronic toxicity) : Remarks: no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (Daphnia magna (Water flea)): 0.0056 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: No toxicity at the limit of solubility

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): >= 1,000 mg/kg
Exposure time: 56 d
Method: OECD Test Guideline 222

Sediment toxicity : NOEC: >= 1000 mg/kg dry weight (d.w.)
Test Type: static test

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Sediment: Artificial sediment
Exposure duration: 28 d
Method: OECD Test Guideline 218

C.I. Pigment Blue 15:1:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: no
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: yes
Remarks: By analogy with a product of similar composition
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) : NOEC (Daphnia magna (Water flea)): > 1 mg/l
End point: Reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to soil dwelling organisms : Test Type: artificial soil
LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d
End point: mortality

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Method: OECD Test Guideline 207
GLP: yes

Test Type: artificial soil
NOEC (Eisenia fetida (earthworms)): $\geq 1,000$ mg/kg
Exposure time: 14 d
End point: mortality
Method: OECD Test Guideline 207
GLP: yes

Sediment toxicity : NOEC (Lumbriculus variegatus (Worm)): 1000 mg/kg dry weight (d.w.)
Analytical monitoring: no
Sediment: artificial soil
Exposure duration: 28 d
Basis for effect: mortality
Method: OECD 225
GLP: yes

C.I. Pigment Black 7:

Toxicity to fish : LC0 (Danio rerio (zebra fish)): 1,000 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): $> 5,600$ 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 : EC50 (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: The details of the toxic effect relate to the nominal concentration.

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

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

Toxicity to microorganisms : EC0 (activated sludge): > 400 mg/l
End point: Bacteria toxicity (growth inhibition)
Exposure time: 3 h
Test Type: static test
Method: DIN 38412
GLP: no

Toxicity to soil dwelling organisms : Test Type: Other
Method: Other
GLP: No information available.
Remarks: This product does not have any known adverse effect on the soil organisms tested.

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

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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): \geq 1,000 mg/l

End point: Bacteria toxicity (respiration inhibition)

Exposure time: 3 h

Test Type: aquatic

Method: OECD Test Guideline 209

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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.

Persistence and degradability

Components:

N,N'-Ethylenedi(stearamide):

Biodegradability : aerobic
Inoculum: activated sludge

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Carbon dioxide (CO₂)
Result: Not readily biodegradable.
Biodegradation: 5.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

C.I. Pigment Blue 15:1:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 107 mg/l
Biochemical Oxygen Demand (BOD)
Result: Not biodegradable
Biodegradation: < 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: no

Physico-chemical
removability : Remarks: Not readily biodegradable.

Stability in water : Remarks: Not applicable

Photodegradation : Test Type: air
Sensitiser: OH
Concentration: 50,000 1/cm³
Rate constant: 8.525E-11 cm³/s
Method: other (calculated)
GLP: no

C.I. Pigment Black 7:

Biodegradability : Remarks: Not applicable

C.I. Pigment White 6:

Biodegradability : Remarks: Not applicable for inorganic compound.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

N,N'-Ethylenedi(stearamide):

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-
octanol/water : Remarks: Not applicable

C.I. Pigment Blue 15:1:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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Partition coefficient: n-octanol/water : Remarks: Not applicable

C.I. Pigment Black 7:

Bioaccumulation : Remarks: Not applicable

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

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not tested.

Components:

N,N'-Ethylenedi(stearamide):

Distribution among environmental compartments : log Koc: 8.6 - 8.91
Method: calculated

C.I. Pigment Blue 15:1:

Distribution among environmental compartments : adsorption
Medium: Soil
Remarks: Not expected to adsorb on soil.

C.I. Pigment Black 7:

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
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

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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:

N,N'-Ethylenedi(stearamide):

- Results of PBT and vPvB assessment : The substance is not identified as a PBT or as a vPvB substance.

C.I. Pigment Blue 15:1:

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

C.I. Pigment Black 7:

- 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 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,

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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 : Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl derivs.
C.I. Pigment Blue 15:1

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
NIOSH REL : USA. NIOSH Recommended Exposure Limits
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 / TWA EV : Time-weighted average exposure value
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek

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

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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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