SAFETY DATA SHEET

K-RES ABS GP35 005.000% #2416 BLACK

Substance key: 000000650554	Revision Date: 09/22/2020
Version : 1 - 2 / CDN	Date of printing :06/16/2023

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

Trade name:	**K-RES ABS GP35 005.000% #2416 BLACK**
Material number:	SA94765600
Synonyms:	07MBS-787
Chemical family:	Colourant preparation Carrier: SAN
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: SAN

Components

Chemical name	CAS-No.	Concentration (% w/w)
C.I. Pigment Blue 15:1	147-14-8	0.1 - 1
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
Styrene	100-42-5	0.1 - 1
N,N'-Ethylenedi(stearamide)	110-30-5	1 - 5
C.I. Pigment Black 7	1333-86-4	5 - 10

2-Propenenitrile, polymer with ethenylbenzene	9003-54-7	60 - 80

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: Styrene Hydrogen cyanide (hydrocyanic acid) Acrylonitrile Carbon monoxide Carbon dioxide (CO2) 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. Nitrogen oxides (NOx) Sulphur oxides Styrene Hydrocarbons
Further information	:	Combustible material In the event of fire and/or explosion do not breathe fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
Environmental precautions	:	Do not allow contact with soil, surface or ground water. Prevent product from entering drains.
Methods and materials for containment and cleaning up	:	Avoid dust formation. Take measures to prevent the build up of electrostatic charge. Sweep up and shovel into suitable containers for disposal. Take up uncontaminated material and pass on for further processing. After cleaning, flush away traces with water.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Take measures to prevent the build up of electrostatic charge.
Advice on safe handling	:	Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation/personal protection. For personal protection see section 8. Avoid contact with skin, eyes and clothing. Use only with adequate ventilation. When handling hot melts use suitable protective clothing. Avoid dust formation. Keep away from sources of ignition. Lead off electrostatic charges.
Conditions for safe storage	:	Keep container tightly closed in a cool, well-ventilated place. Protect from moisture. Keep away from direct sunlight.
Further information on storage conditions	:	Store in a cool, dry, well-ventilated area. Keep container sealed when not in use. Keep in an area equipped with sprinklers. Minimize dust generation and accumulation.
Materials to avoid	:	not required

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
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 particulate matter)	3 mg/m3	ACGIH
Styrene	100-42-5	TWA	20 ppm 85 mg/m3	CA AB OEL
		STEL	40 ppm 170 mg/m3	CA AB OEL
		TWA	20 ppm	CA BC OEL
		STEL	40 ppm	CA BC OEL
		TWA	35 ppm	CA ON OEL
		STEL	100 ppm	CA ON OEL
		STEV	100 ppm 426 mg/m3	CA QC OEL
		TWAEV	50 ppm 213 mg/m3	CA QC OEL
		TWA	20 ppm	ACGIH
		STEL	40 ppm	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	:	black
Odour	:	characteristic
Odour Threshold	:	Not applicable
pH	:	Not applicable
Melting point	:	> 105 °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
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	:	no data available None. Strong oxidizing agents
Hazardous decomposition products	:	Possible in traces: Nitrogen oxides (NOx) 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: > 5,000 mg/kg Method: Calculation method

Components:

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

Styrene:

Acute oral toxicity	:	LD50 (Rat): 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 11.8 mg/l Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg

N,N'-Ethylenedi(stearamide):

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

Skin corrosion/irritation

Product:

Result: No skin irritation

Components:

C.I. Pigment Blue 15:1:

Species: Rabbit
Exposure time: 20 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: no

Styrene:

Result: Irritating to skin.

N,N'-Ethylenedi(stearamide):

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

C.I. Pigment Black 7:

Species: Rabbit
Exposure time: 4 - 24 h
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: no

Serious eye damage/eye irritation

Product:

Result: No eye irritation

Components:

C.I. Pigment Blue 15:1:

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

Styrene:

Result: Irritating to eyes.

N,N'-Ethylenedi(stearamide):

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

C.I. Pigment Black 7:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
GLP: no

Respiratory or skin sensitisation

Product:

Result: non-sensitizing

Components:

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

Styrene:

Result: Does not cause skin sensitisation.

N,N'-Ethylenedi(stearamide):

Species: Mouse
Method: OECD Test Guideline 429
Result: Not a skin sensitizer.

C.I. Pigment Black 7:

Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.
GLP: yes

Germ cell mutagenicity

Components:

C.I. Pigment Blue 15:1:

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

Styrene:

Genotoxicity in vitro : Remarks: no data available

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

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 Black 7:

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
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 - : Weight of evidence does not support classification as a germ

Assessment		cell mutagen.

Carcinogenicity

Components:

C.I. Pigment Blue 15:1:

Carcinogenicity - Assessment	:	No information available.

Styrene:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

N,N'-Ethylenedi(stearamide):

Carcinogenicity - Assessment	:	No information available.

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 - Assessment	:	Not classifiable as a human carcinogen.

Reproductive toxicity

Components:

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) 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.

Styrene:

Effects on fertility : Remarks: Based on available data, the classification criteria are not met.

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

N,N'-Ethylenedi(stearamide):

Effects on foetal development : Test Type: Pre-natal
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 - 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.

STOT - single exposure

Components:

C.I. Pigment Blue 15:1:

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

Styrene:

Assessment: May cause respiratory irritation.

N,N'-Ethylenedi(stearamide):

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.

STOT - repeated exposure

Components:

C.I. Pigment Blue 15:1:

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

Styrene:

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

N,N'-Ethylenedi(stearamide):

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.

Repeated dose toxicity

Components:

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

Styrene:

Remarks: This information is not available.

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

Aspiration toxicity

Components:

C.I. Pigment Blue 15:1:

No aspiration toxicity classification

Styrene:

May be fatal if swallowed and enters airways.

N,N'-Ethylenedi(stearamide):

no data available

C.I. Pigment Black 7:

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
Remarks: Not applicable

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :

Remarks: no data available

Components:

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

Styrene:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 4.02 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 4.7 mg/l Exposure time: 48 h

Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 4.9 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: no data available
Toxicity to microorganisms	:	EC50 (Bacteria): 500 mg/l Exposure time: 0.5 h
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

Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.

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

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
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.

Persistence and degradability

Components:

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

Styrene:

Biodegradability	:	aerobic Result: Readily biodegradable. Biodegradation: 70.9 % Exposure time: 28 d

N,N'-Ethylenedi(stearamide):

Biodegradability	:	aerobic Inoculum: activated sludge Carbon dioxide (CO2) Result: Not readily biodegradable. Biodegradation: 5.5 %

Exposure time: 28 d
Method: OECD Test Guideline 301B

C.I. Pigment Black 7:

Biodegradability : Remarks: Not applicable

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not tested.

Components:

C.I. Pigment Blue 15:1:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

Styrene:

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

N,N'-Ethylenedi(stearamide):

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

C.I. Pigment Black 7:

Bioaccumulation : Remarks: Not applicable

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not tested.

Components:

C.I. Pigment Blue 15:1:

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

Styrene:

Distribution among environmental compartments : Remarks: no data available

N,N'-Ethylenedi(stearamide):

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

C.I. Pigment Black 7:

Distribution among environmental compartments	:	Adsorption/Soil Medium: water - soil Remarks: Not applicable

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:

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.

Styrene:

Environmental fate and pathways	:	no data available
Results of PBT and vPvB assessment	:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Additional ecological information	:	The product should not be allowed to enter drains, water courses or the soil.

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 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.

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

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 ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
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
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA ON OEL / STEL	:	Short-Term Exposure Limit (STEL)
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term 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 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

Revision Date	:	09/22/2020
Date format	:	mm/dd/yyyy

The information contain herein is accurate to the best knowledge of Avient Corporation and its subsidiaries and affiliates. However, neither Avient nor any of its subsidiaries or affiliates assumes any liability whatsoever for the accuracy or completeness of the information contained

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.

CA / EN