PerformaSil® 200 Anti-Graffiti Coating
Safety Data Sheet

Date of issue: 08/13/2020 Revision date: 2/13/2024 Version: 1.4

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Name : PerformaSil® 200 Anti-Graffiti Coating

Product code : PA

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use,Industrial use

Industrial/Professional use spec : Industrial
For professional use only

Use of the substance/mixture : Coating

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ICD High Performance Coatings + Chemistries
7350 S. Union Ridge Parkway
Ridgefield, WA 98642
United States of America

Tel: +1 (360) 546 2286
Fax: +1 (360) 546 2287

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number
UNITED STATES OF AMERICA	ICD High Performance Coatings + Chemistries	7350 S. Union Ridge Parkway Ridgefield, WA 98642	: +1 (360) 546 2286

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS Classification according to OSHA Hazard Communication Standard (29 CFR 1910.1200)

H316 Skin irritation : Category 3

H319 Eye Irritation : Category 2A

H361 Reproductive Toxicity : Category 2

Full text of H-phrases mentioned in this Section: see Section 16

2.2. Label elements

Labeling according to OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazard pictograms :

Signal word : Warning

Hazard statements : Causes mild skin irritation
Causes serious eye irritation
Suspected of damaging fertility or the unborn child

Precautionary statements : **Prevention:**
Wash skin and face thoroughly after handling.
Wear protective gloves and eye protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Response:
IF IN EYES: Rinse continuously with water for several minutes.

Remove contact lenses, if present, and easy to do. Continue rinsing.
If skin irritation occurs: Get medical attention.
If eye irritation persists: Get medical attention.
If exposed or concerned: get medical advice.
Store locked up.
Disposal:
Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Hazardous ingredients:

Name	CAS No.	Concentration (Wt %)
Water	7732-18-5	40 - 50%
Organomodified polydimethylsiloxane	Trade secret	30 - 40%
Silicon dioxide	7631-86-9	5 - 10%
Diethylamine	109-89-7	0.25 - 1%
2-Amino-2-methyl-1-propanol	124-68-5	0.25 - 1%
Octamethylcyclotetrasiloxane	556-67-2	0.1 - 1 %
Titanium dioxide	13463-67-7	0 - 5 %
Carbon black	1333-86-4	0 - 5 %
Cobalt aluminate blue spinel	1345-16-0*	0 - 5 %
Cobalt titanate green spinel	68186-85-6*	0 - 5 %
Antimony nickel titanium oxide yellow	8007-18-9*	0 - 5 %
Rutile tin zinc	85536-73-8*	0 - 5 %
Niobium sulfur tin zinc oxide	1374645-21-2*	0 - 5 %
Iron oxide red	1309-37-1	0 - 5 %
Yellow iron hydroxide oxide	20344-49-4	0 - 5 %

Composition Comments : This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. In case of accident or if you feel unwell, seek medical advice (show the label where possible). When symptoms persist or in all cases of doubt seek medical advice.

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest. Get medical attention

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : No data available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Water spray. Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
Unsuitable extinguishing media	:	None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides. Silicon oxides. Formaldehyde.

5.3. Advice for firefighters

Firefighting instructions	:	Use extinguishing methods that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Protection during firefighting	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

6.2. Environmental precautions

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the clean-up of releases. You will need to determine which regulations are applicable.

6.4. Reference to other sections

Sections 13 and 15 of this SDS provide information regarding certain local or national requirments.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Local/Total ventilation	:	Use only with adequate ventilation.
Precautions for safe handling	:	Avoid inhalation of vapor or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures	:	Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash Skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep in properly labeled containers. Store in accordance with the particular national regulations.
Incompatible materials	:	Strong oxidizing agents, strong acids

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ingredients with workplace control parameters:

Ingredients	CAS-No.	Type (Form of exposure)	Value	Basis
Silicon dioxide	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica) 80 mg/m^3 / %SiO_2 (Silica)	OSHA
		TWA	6 mg/m^3 (Silica)	NIOSH

Diethylamine	109-89-7	TWA	5 ppm	ACGIH
		STEL	15 ppm	ACGIH
		TWA	25 ppm 75 mg/m³	OSHA Z-1
		TWA	10 ppm 30 mg/m³	NIOSH REL
		ST	25 ppm 75 mg/m³	NIOSH REL
		C	5 ppm 15 mg/m³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Tin and compounds		PEL	2 mg/m3	OSHA
		TWA	2 mg/m3	ACGIH
		TWA	2 mg/m3	NIOSH
Iron oxide red	1309-37-1	TWA	5 mg/m3	WEL
		STEL	10 mg/m3	WEL
Titanium dioxide	13463-67-7	PEL	15 mg/m3	OSHA
		TWA	10 mg/m3	ACGIH
Cobalt metal, dust and fumes		PEL	0.1 mg/m3	OSHA
		TWA	0.02 mg/m3	ACGIH
		TWA	0.05 mg/m3	NIOSH
Nickel, metal and insoluble compounds		PEL	1 mg/m3	OSHA
		TWA	1.5 mg/m3	ACGIH
		TWA	0.015 mg/m3	NIOSH
Antimony nickel titanium oxide yellow	8007-18-9	TWA	3 mg/m3	ACGIH
Carbon black	1333-86-4	TWA	3.5 mg/m3	OSHA
		TWA	3 mg/m3	ACGIH
		TWA	3.5 mg/m3	NIOSH
Octamethylcyclotetrasiloxane	556-67-2	TWA	10 ppm	US WEEL

8.2. Exposure controls

Appropriate engineering controls	:	Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workspace exposure concentrations.
Personal protective equipment	:	Protective clothing. Protective goggles or safety glasses. Gloves.
Hand protection	:	Permeation-resistant gloves, Butyl rubber gloves, Nitrile rubber gloves, Neoprene gloves.
Eye protection	:	Chemical safety goggles or safety glasses with side shields., Chemical safety goggles in combination with a full face shield if a splash hazard exists.
Skin and body protection	:	Permeation-resistant clothing, Gloves, long-sleeved shirts, and pants.
Respiratory protection	:	Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: NIOSH approved respirator with organic vapor cartridge and a particulate pre-filter.
Other information	:	Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available. Store separate from food products.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Colour	:	Various
Odour	:	Amine, mild
Odour threshold	:	No data available
pH	:	11 - 12
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	0 °C
Boiling point	:	100 °C
Flash point	:	> 101.1 °C Method: closed cup
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Non-flammable
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	1.02 g/cm³
Solubility	:	No data available
Log Pow	:	No data available
Viscosity, kinematic	:	20000 cSt
Explosive properties	:	Not explosive
Oxidising properties	:	This mixture is not classified as oxidizing.
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not classified as a reactivity hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Oxidizing agents, strong acids

10.6. Hazardous decomposition products

Carbon oxides. Silicon oxides. Formaldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation. Skin contact. Ingestion. Eye contact.

Acute toxicity : Not classified based on available data.
Acute oral toxicity estimate: >5000 mg/kg
Method: calculation method
Acute dermal toxicity estimate: >5000 mg/kg
Method: calculation method
Acute inhalation toxicity estimate: >5000 mg/kg
Method: calculation method

Ingredient	Remarks
Organomodified polydimethylsiloxane	No data available
Silicon dioxide	No data available
Diethylamine	LD50 Oral - Rat - male - 100 mg/kg (OECD Test Guideline 401) Acute toxicity estimate Oral - 100 mg/kg (Calculation method) LC50 Inhalation - Rat - female - 4 h - 17,11 mg/l – vapor (OECD Test Guideline 403) Acute toxicity estimate Inhalation - 17,11 mg/l – vapor (Calculation method) LD50 Dermal - Rabbit - male - 582 mg/kg Remarks: (IUCLID) (ECHA) Acute toxicity estimate Dermal - 582 mg/kg (Calculation method)
2-Amino-2-methyl-1-propanol	LD50 Oral - Rat - male - 2.900 mg/kg (2-Amino-2-methyl-1-propanol) (OECD Test Guideline 401) Inhalation: No data available LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg (2-Amino-2-methyl-1-propanol) (OECD Test Guideline 402)
Octamethylcyclotetrasiloxane	LD50, Rat, male, >4 800 mg/kg No deaths occurred at this concentration.
Titanium dioxide	LD50 Oral - Rat - > 10.000 mg/kg Inhalation: No data available LD50 Dermal - Rabbit - > 10.000 mg/kg
Carbon black	LD50 Oral - Rat - male and female - > 8.000 mg/kg Inhalation: No data available LD50 Dermal - Rabbit - > 3.000 mg/kg
Cobalt aluminate blue spinel	No data available
Cobalt titanate green spinel	No data available
Antimony nickel titanium oxide yellow	No data available
Rutile tin zinc	No data available
Niobium sulfur tin zinc oxide	No data available
Iron oxide red	No data available
Yellow iron hydroxide oxide	No data available

Skin corrosion/irritation : May cause mild skin irritation

Ingredient	Remarks
Organomodified polydimethylsiloxane	No data available
Silicon dioxide	No data available
Diethylamine	Skin - Rabbit Result: Causes severe burns. (OECD Test Guideline 404) Remarks: (Regulation (EC) No 1272/2008, Annex VI)
2-Amino-2-methyl-1-propanol	Brief contact may cause severe skin irritation with pain and local redness. Prolonged contact may cause severe skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. Not classified as corrosive to the skin according to EC guidelines.
Octamethylcyclotetrasiloxane	Brief contact is essentially nonirritating to skin.
Titanium dioxide	Skin - Rabbit Result: No skin irritation
Carbon black	Skin - Rabbit Result: No skin irritation - 24 h
Cobalt aluminate blue spinel	No data available
Cobalt titanate green spinel	No data available
Antimony nickel titanium oxide yellow	No data available
Rutile tin zinc	No data available
Niobium sulfur tin zinc oxide	No data available
Iron oxide red	No data available
Yellow iron hydroxide oxide	No data available

Serious eye damage/eye irritation : May cause serious eye irritation.

Ingredient	Remarks
Organomodified polydimethylsiloxane	No data available
Silicon dioxide	No data available
Diethylamine	Eyes - Rabbit Result: Causes burns. - 7 Days (Regulation (EC) No. 440/2008, Annex, B.5)
2-Amino-2-methyl-1-propanol	May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.
Octamethylcyclotetrasiloxane	Essentially nonirritating to eyes.
Titanium dioxide	Eyes - Rabbit Result: No eye irritation
Carbon black	Eyes - Rabbit Result: No eye irritation
Cobalt aluminate blue spinel	No data available
Cobalt titanate green spinel	No data available
Antimony nickel titanium oxide yellow	No data available
Rutile tin zinc	No data available
Niobium sulfur tin zinc oxide	No data available
Iron oxide red	No data available
Yellow iron hydroxide oxide	No data available

Skin sensitization : Not classified based on available information.

Respiratory sensitization : Not classified based on available information.

Germ cell mutagenicity : Not classified based on available information.

Carcinogenicity : Not classified based on available information.

Ingredient	Remarks
Organomodified polydimethylsiloxane	No data available
Silicon dioxide	No data available
Diethylamine	Species: Rat Exposure time: 104 weeks Application Route: Inhalation Result: negative
2-Amino-2-methyl-1-propanol	No relevant data found
Octamethylcyclotetrasiloxane	Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.
Titanium dioxide	Suspected of causing cancer. IARC has classified TIO2 as 2B Possibly carcinogenic to humans. However, the only evidence of carcinogenicity is in rats exposed to very high concentrations. Two major epidemiology studies among titanium dioxide workers in the US and in EUROPE could not demonstrate an elevated lung cancer risk. Boffetta et. al. Mortality among workers employed in the titanium dioxide production industry in Europe. Cancer Causes Control. 2004 Sep;15(7):697-706. Fryzek et. al. A cohort mortality study among titanium dioxide manufacturing workers in the United States. J Occup Environ Med. 2003 Apr;45(4):400-9. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. IARC Monographs, Volume 93 (Summary)
Carbon black	IARC monographs report that certain carbon blacks have been found to be carcinogenic to animals in laboratory experiments.
Cobalt aluminate blue spinel	IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans. This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides
Cobalt titanate green spinel	IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans. This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.
Antimony nickel titanium oxide yellow	No data available
Rutile tin zinc	No data available

Niobium sulfur tin zinc oxide	No data available
Iron oxide red	No data available
Yellow iron hydroxide oxide	No data available

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Ingredient	Remarks
Organomodified polydimethylsiloxane	No data available
Silicon dioxide	No data available
Diethylamine	No data available
2-Amino-2-methyl-1-propanol	In animal studies, did not interfere with reproduction.
Octamethylcyclotetrasiloxane	In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, has been shown to interfere with fertility.
Titanium dioxide	No data available
Carbon black	No data available
Cobalt aluminate blue spinel	No data available
Cobalt titanate green spinel	No data available
Antimony nickel titanium oxide yellow	No data available
Rutile tin zinc	No data available
Niobium sulfur tin zinc oxide	No data available
Iron oxide red	No data available
Yellow iron hydroxide oxide	No data available

Specific target organ toxicity (single exposure) : Not classified based on available data.

Specific target organ toxicity (repeated exposure) : Not classified based on available data.

Repeated dose toxicity : Not classified based on available data.

Aspiration hazard : Not classified based on available data.

Potential adverse human health effects and symptoms : Not classified based on available data.

Further Information : No chronic effects are known from repeated exposure to iron oxide pigment. Prolonged inhalation (6 to 10 years) of iron oxide fumes has been reported to produce changes in lung x- rays of exposed individuals. This condition, siderosis, is considered to be benign pneumoconiosis that exhibits no adverse health effects. Siderosis has been observed among occupations such as arc welders where iron oxide fumes are present. To the best of our knowledge, this condition has not been observed after prolonged exposure to iron oxide pigment. There are no iron oxide fumes contained in this product and none should be generated under normal use.

SECTION 12: Ecological information

12.1. Toxicity

Organomodified polydimethylsiloxane:

No data available

Silicon dioxide:

No data available

Diethylamine:

Toxicity to fish	LC50 - Oryzias latipes (Japanese medaka): 27 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Ceriodaphnia dubia (water flea): 4.6 mg/l Exposure time: 48 h
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae): 54 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC - Daphnia magna (water flea): 4.2 mg/l Exposure time: 21 d

2-Amino-2-methyl-1-propanol:

Toxicity to fish	Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

	May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms. LC50 - Lepomis macrochirus (Bluegill sunfish): 190 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea): 193 mg/l Exposure time: 48 h
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae): 402 mg/l Exposure time: 72 h
Toxicity to bacteria	EC50 (activated sludge): 342.9 mg/l Exposure time: 3 h

Octamethylcyclotetrasiloxane:

Toxicity to fish	The estimated maximum aqueous concentration of Octamethylcyclotetrasiloxane (D4) from migration to water from the product as supplied is below the D4 established no-effect threshold (< 0.0079 mg/L) for aquatic organisms. LC50 - Oncorhynchus mykiss (rainbow trout): 0.022 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea): 0.015 mg/l Exposure time: 48 h
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (green algae): 0.022 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	NOEC - Oncorhynchus mykiss (rainbow trout): 0.0044 mg/l Exposure time: 93 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC - Daphnia magna (water flea): 0.0079 mg/l Exposure time: 21 d

Titanium dioxide:

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow): >1.0 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea): > 1.000 mg/l Exposure time: 48 h

Carbon black:

Toxicity to fish	LC50 - Danio rerio (zebra fish): >1.000 mg/l - 96 h (OECD Test Guideline 203) Remarks: (above the solubility limit in the test medium)
Toxicity to algae	ErC50 - Desmodesmus subspicatus (green algae): >10.000 mg/l - 72 h (OECD Test Guideline 201)

Cobalt aluminate blue spinel:
No data available

Cobalt titanate green spinel:
No data available

Antimony nickel titanium oxide yellow:
No data available

Rutile tin zinc:
No data available

Niobium sulfur tin zinc oxide:
No data available

Iron oxide red:
No data available

Yellow iron hydroxide oxide:
No data available

12.2. Persistence and degradability

Organomodified polydimethylsiloxane:
No data available

Silicon dioxide:

The methods for determining biodegradability are not applicable to inorganic substances

Diethylamine:

Biodegradability	aerobic - Exposure time 28 d Result: 68 - 70 % - Readily biodegradable. (OECD Test Guideline 301C)
Theoretical oxygen demand	3.620 mg/g Remarks: (IUCLID)

2-Amino-2-methyl-1-propanol:

Biodegradability	aerobic - Exposure time 28 d Result: 89.3 % - Readily biodegradable. (OECD Test Guideline 301F)

Octamethylcyclotetrasiloxane:

Biodegradability	aerobic - Exposure time 29 d Result: 3.7 % - Not readily biodegradable. (OECD Test Guideline 310)

Titanium dioxide:
The methods for determining biodegradability are not applicable to inorganic substances

Carbon black:
No data available

Cobalt aluminate blue spinel:
The methods for determining biodegradability are not applicable to inorganic substances

Cobalt titanate green spinel:
The methods for determining biodegradability are not applicable to inorganic substances

Antimony nickel titanium oxide yellow:
The methods for determining biodegradability are not applicable to inorganic substances

Rutile tin zinc:
The methods for determining biodegradability are not applicable to inorganic substances

Niobium sulfur tin zinc oxide:
The methods for determining biodegradability are not applicable to inorganic substances

Iron oxide red:
The methods for determining biodegradability are not applicable to inorganic substances

Yellow iron hydroxide oxide:
The methods for determining biodegradability are not applicable to inorganic substances

12.3. Bioaccumulative potential

Organomodified polydimethylsiloxane:
No data available

Silicon dioxide:
No data available

Diethylamine:

Partition coefficient: n-octanol/water (Log Pow)	0.58

2-Amino-2-methyl-1-propanol:

Bioaccumulation	Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water (log Pow)	-0.63 OECD Test Guideline 107 or Equivalent
Bioconcentration factor (BCF)	< 1 Fish

Octamethylcyclotetrasiloxane:

Bioaccumulation	Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7). Pimephales promelas (fathead minnow) – 0.160 µg/l
Partition coefficient: n-octanol/water (log Pow)	6.49
Bioconcentration factor (BCF)	12.400 (US-EPA)

Titanium dioxide:
No data available

Carbon black:
No data available

Cobalt aluminate blue spinel:
No data available

Cobalt titanate green spinel:
No data available

Antimony nickel titanium oxide yellow:
No data available

Rutile tin zinc:
No data available

Niobium sulfur tin zinc oxide:
No data available

Iron oxide red:
No data available

Yellow iron hydroxide oxide:
No data available

12.4. Mobility in soil

Organomodified polydimethylsiloxane:
No data available

Silicon dioxide:
No data available

Diethylamine:
No data available

2-Amino-2-methyl-1-propanol:

Partition coefficient (Koc):	18 Estimated.

Octamethylcyclotetrasiloxane:

Partition coefficient (Koc):	16596 OECD Test Guideline 106

Titanium dioxide:
No data available

Carbon black:

No data available

Cobalt aluminate blue spinel:
No data available

Cobalt titanate green spinel:
No data available

Antimony nickel titanium oxide yellow:
No data available

Rutile tin zinc:
No data available

Niobium sulfur tin zinc oxide:
No data available

Iron oxide red:
No data available

Yellow iron hydroxide oxide:
No data available

12.5. Results of PBT and vPvB assessment

Organomodified polydimethylsiloxane:
No data available

Silicon dioxide:
No data available

Diethylamine:
Not considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

2-Amino-2-methyl-1-propanol:
This substance is readily biodegradable and thus is not considered persistent or very persistent (P or vP). This substance has a low potential to bioaccumulate due to low affinity for octanol and high water solubility so is not considered bioaccumulative or very bioaccumulative (B or vB). This substance is not classified as mutagenic, carcinogenic or reproductive toxicant to mammalian species, and the values are much higher than the threshold for toxicity to aquatic species; thus is not considered toxic (T).

Octamethylcyclotetrasiloxane:
Octamethylcyclotetrasiloxane (D4) meets the current criteria for PBT and vPvB under REACh Annex XIII or other regionally specific criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.
This substance is considered to be persistent, bioaccumulating and toxic (PBT).

Titanium dioxide:
Not considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Carbon black:
Not considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Cobalt aluminate blue spinel:
No data available

Cobalt titanate green spinel:
No data available

Antimony nickel titanium oxide yellow:
No data available

Rutile tin zinc:
No data available

Niobium sulfur tin zinc oxide:
No data available

Iron oxide red:
No data available

Yellow iron hydroxide oxide:
No data available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Resource Conservation and Recovery Act (RCRA)	:	This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.
Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not dangerous goods in terms of transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	Not applicable
Proper Shipping Name (IMDG)	:	Not applicable
Proper Shipping Name (IATA)	:	Not applicable
Proper Shipping Name (ADN)	:	Not applicable
Proper Shipping Name (RID)	:	Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Domestic regulation

49 CFR

Not dangerous according to transport regulations

14.6. Special precautions for user

14.6.1. Overland transport

14.6.2. Transport by sea

14.6.3. Air transport

14.6.4. Inland waterway transport

Carriage prohibited (ADN) : No
Not subject to ADN : No

14.6.5. Rail transport

Carriage prohibited (RID) : No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EPCRA – Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No	Component RQ (lbs)	Calculated product RQ (lbs)
Diethylamine	109-89-7	100	27777

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ

SARA 311/312 Hazards : Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : THIS PRODUCT CONTAINS A CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. THIS INFORMATION MUST BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

100% Cobalt Compound

100% Nickel Compound

100% Zinc Compound

46% Antimony Compound

15.1.2. National regulations

US State Right To Know Regulations

Ingredient	CAS No.
Water	7732-18-5
Organomodified polydimethylsiloxane	Trade secret

Silicon dioxide	7631-86-9
Diethylamine	109-89-7
2-Amino-2-methyl-1-propanol	124-68-5
Octamethylcyclotetrasiloxane	556-67-2
Titanium dioxide	13463-67-7
Carbon black	1333-86-4
Cobalt aluminate blue spinel	1345-16-0*
Cobalt titanate green spinel	68186-85-6*
Antimony nickel titanium oxide yellow	8007-18-9*
Rutile tin zinc	85536-73-8*
Niobium sulfur tin zinc oxide	1374645-21-2*
Iron oxide red	1309-37-1
Yellow iron hydroxide oxide	20344-49-4

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The ingredients of this product are reported in the following inventories:

REACH	:	All ingredients (pre)registered or exempt.
TSCA	:	All chemical substances in this material are included on or exempted fro listing on the TSCA Inventory of Chemical Substances.
DSL	:	All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or are exempt from listing on the Canadian Domestic Substances List (DSL).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources	:	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Internal technical data, data from raw material SDS's, and OECD eChem Portal search results.
Other information	:	None.

Full text of H- phrases:

H316	Causes mild skin irritation
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child

SDS US

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.