

SAFETY DATA SHEET



The information in this Safety Data Sheet is required pursuant to Hazardous Product Regulations 2015.

Date of issue/Date of revision 2 September 2023

Version 14

Section 1. Identification

Product name : SIGMADUR ONE GREEN 4199

Product code : 00322213

Other means of identification : Not available.

Product type : Liquid.

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

Product use : Professional applications, Used by spraying.

Use of the substance/mixture : Coating.

Uses advised against : Not applicable.


Supplier : PPG Architectural Coatings Canada, Inc.
1550, rue Ampère, bureau 500
Boucherville (Québec) J4B 7L4
Canada
+1 450-655-3121

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
SETIQ Interior de la República: 800-00-214-00 (México)
SETIQ Ciudad de México: (55) 5559-1588 (México)

Technical Phone Number : 888-977-4762

Section 2. Hazard identification

Classification of the substance or mixture :  LAMMABLE LIQUIDS - Category 3
CARCINOGENICITY - Category 1
TOXIC TO REPRODUCTION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
Health Hazards Not Otherwise Classified - Category 1


GHS label elements

Hazard pictograms :



Section 2. Hazard identification

Signal word : Danger

Hazard statements :  Flammable liquid and vapor.
May cause drowsiness or dizziness.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS))
Prolonged or repeated contact may dry skin and cause irritation.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated. DANGER - RAGS, STEEL WOOL OR WASTE SOAKED WITH THIS PRODUCT MAY SPONTANEOUSLY CATCH FIRE IF IMPROPERLY DISCARDED. IMMEDIATELY AFTER EACH USE, PLACE RAGS, STEEL WOOL OR WASTE IN A SEALED WATER-FILLED METAL CONTAINER.
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 37% (oral), 74.1% (dermal), 79.7% (inhalation)


Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product name : SIGMADUR ONE GREEN 4199

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	Synonyms	% (w/w)	CAS number
 Naphtha (petroleum), hydrodesulfurized heavy	naphtha (petroleum), hydrodesulphurized heavy; Low boiling point hydrogen treated naphtha; Naphtha, petroleum, hydrodesulfurized heavy; naphtha (petroleum), hydrodesulfurized heavy, as light oils; low boiling point hydrogen treated naphtha, as light oils; Naphtha, (petroleum), heavy, hydrodesulfurized; ALIPHATIC HYDROCARBON;	10 - 30*	64742-82-1

Section 3. Composition/information on ingredients

	NAPHTHA (PETROLEUM), HYDROGENSULFURIZED HEAVY; OILS, NAPHTHA, HYDRODESULFURIZED HEAVY; Naphtha (petroleum), hydrodesulfurized heavy, Low boiling point hydrogen treated naphtha; Naphtha (petroleum), hydrodesulfurised heavy		
barium sulfate	Sulfuric acid, barium salt (1:1); CI 77120; Barytes; Barium salt of sulfuric acid; Barite; Artificial barite; barium sulphate; C. I. Pigment White 21; barium sulfate, natural; blanc fixe; C.I. 77120	7 - 13*	7727-43-7
Solvent naphtha (petroleum), medium aliph.	Straight run kerosine; Solvent naphtha, petroleum, medium aliphatic; Medium aliphatic solvent naphtha, petroleum; Solvent naphtha medium aliphatic; Solvent naphtha, medium aliph.; Stoddard Solvent; Solvent naphtha (petroleum), medium aliphatic; MEDIUM ALIPHATIC SOLVENT NAPHTHA (PETROLEUM); Straight run white spirit; White spirit type 0, regular flash point; Medium aliphatic solvent naphtha (petroleum) C9-C12	5 - 10*	64742-88-7
iron hydroxide oxide yellow	C.I. Pigment Yellow 42; CI 77492; iron hydroxide oxide yellow; E 172; iron oxide yellow; C.I. 77492; iron hydroxide oxide yellow; C.I. 77492; E 172; iron oxide yellow; Iron oxide; Iron Oxide Yellow; Transparent iron oxide yellow; C.I. pigment yellow 042; FERRIC OXIDE, FERRIC HYDROXIDE, CALCIUM CARBONATE; C.I. PIGMENT YELLOW 42, (IRON OXIDE (YELLOW)); SYNTHETIC YELLOW IRON OXIDE	1 - 5*	51274-00-1
2-ethylhexanoic acid, zirconium salt	Hexanoic acid, 2-ethyl-, zirconium salt (1:?) ; Hexanoic acid, 2-ethyl-, zirconium salt; Zirconium 2-ethylhexanoate; Zirconium salt of 2-ethylhexanoic acid; Aliphatic monocarboxylic acid (C6-28) salt (Pb, Cu, Mn, Zn, Zr, Ce, Cd, Sn, Sr, Co); 2-Ethylhexanoic acid zirconium salt; HEXANOATE, 2-ETHYL-, ZIRCONIUM; ZIRCONIUM OCTOATE; Zirconium 2-ethylhexanoate (component unspecified)	1 - 5*	22464-99-9
Talc , not containing asbestiform fibres	Talc; magnesium silicate monohydrate (talc) not containing asbestiform fibres	1 - 5*	14807-96-6
nonane	Nonyl hydride; n-Nonane; 2,2,5-Trimethylhexane	0.5 - 1.5*	111-84-2
Solvent naphtha (petroleum), heavy arom.	Kerosine - unspecified; Solvent naphtha, petroleum, heavy aromatic; (Polyethyl)	0.5 - 1.5*	64742-94-5

Section 3. Composition/information on ingredients

calcium bis(2-ethylhexanoate)	benzenes; Heavy aromatic solvent naphtha; Solvent naphtha; Solvent naphtha (petroleum), heavy aromatic; Heavy solvent naphtha; Solvent naphtha (petroleum), heavy arom; AROMATIC PETROLEUM DISTILLATE; Solvent Naphtha (petroleum); OILS, NAPHTHA HEAVY AROMATIC HYDROCARBON		
	Hexanoic acid, 2-ethyl-, calcium salt (2:1); Hexanoic acid, 2-ethyl-, calcium salt; Calcium 2-ethylhexanoate; calcium 2-ethylhexoate; Hexanoic acid, 2-ethyl-, calcium salt; Aliphatic monocarboxylic acid (C6-28) light metal salt (Na,K,Li,Ba, Mg,Ca); 2-ETHYLHEXANOIC ACID CALCIUM SALT; HEXANOATE, ETHYL-, CALCIUM; HEXANOATE, 2-ETHYL-, CALCIUM; CALCIUM-2-ETHYLHEXOATE	0.1 - 1*	136-51-6
2-butanone oxime	butanone oxime; ethyl methyl ketoxime; ethyl methyl ketone oxime; 2-Butanone, oxime; METHYL ETHYL KETOXIME; METHYL ETHYL KETONE OXIME; ethyl methyl ketoxime; ethyl methyl ketone oxime; MEKO; syn-O,O'-di(butan-2-one oxime)diethoxysilane; Methyl alkyl (C2-4) ketoxime; Butan-2-one oxime	0.1 - 1*	96-29-7
ethylbenzene	Benzene, ethyl-; Phenylethane; Ethylbenzol; photosensitive emulsion consisting of cyclized polyisoprene containing: — 55 % or more but not more than 75 % by weight of xylene (CAS RN 1330-20-7) and — 12 % or more but not more than 18 % by weight of ethylbenzene (CAS RN 100-41-4); EB; Mono-(or di-) methyl (ethyl,bromoallyl, bromopropylloxycarbonyl or chloropropylloxycarbonyl) benzene	0.1 - 1*	100-41-4
2-ethylhexanoic acid, cobalt salt	Hexanoic acid, 2-ethyl-, cobalt salt (1:?): Hexanoic acid, 2-ethyl-, cobalt salt; Cobalt 2-ethyl hexanoate; cobalt 2-ethylhexoate; Cobalt 2-ethylcaproate; Hexanoic acid, 2-ethyl, cobalt salt; Aliphatic monocarboxylic acid (C6-28) salt (Pb, Cu, Mn, Zn, Zr, Ce, Cd, Sn, Sr, Co); 2-Ethylhexanoic acid, cobalt salt (1:?): 2-Ethylhexanoic acid cobalt salt; HEXANOATE, 2-ETHYL, COBALT; HEXANOATE, 2-ETHYL-, COBALT (II)	0.1 - 1*	13586-82-8

*Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

SUB codes represent substances without registered CAS Numbers.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

- | | |
|---------------------|--|
| Eye contact | : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice. |
| Inhalation | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| Skin contact | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. |
| Ingestion | : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

- | | |
|---------------------|---|
| Eye contact | : No known significant effects or critical hazards. |
| Inhalation | : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. |
| Skin contact | : Defatting to the skin. May cause skin dryness and irritation. |
| Ingestion | : Can cause central nervous system (CNS) depression. |

Over-exposure signs/symptoms

- | | |
|---------------------|---|
| Eye contact | : No specific data. |
| Inhalation | : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations |
| Skin contact | : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations |
| Ingestion | : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations |

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First-aid measures

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : Ingestion of product or cured coating may be harmful. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Naphtha (petroleum), hydrodesulfurized heavy barium sulfate	None. CA British Columbia Provincial (Canada, 6/2022). TWA: 5 mg/m ³ 8 hours. Form: Inhalable CA Ontario Provincial (Canada, 6/2019). TWA: 5 mg/m ³ 8 hours. Form: Inhalable particulate matter. CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 10 mg/m ³ 8 hours. CA Quebec Provincial (Canada, 6/2022). TWA _{EV} : 5 mg/m ³ 8 hours. Form: inhalable dust CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m ³ 15 minutes. TWA: 10 mg/m ³ 8 hours.
Solvent naphtha (petroleum), medium aliph.	CA Ontario Provincial (Canada, 6/2019). [Mineral Spirits] TWA: 525 mg/m ³ 8 hours.
iron hydroxide oxide yellow	CA British Columbia Provincial (Canada, 6/2022). [Iron oxide dust as Fe] TWA: 5 mg/m ³ , (as Fe) 8 hours. Form: Dust CA British Columbia Provincial (Canada, 6/2022). [Iron oxide Fume, as Fe] TWA: 5 mg/m ³ , (as Fe) 8 hours. Form: Fume STEL: 10 mg/m ³ , (as Fe) 15 minutes. Form: Fume
2-ethylhexanoic acid, zirconium salt	CA Alberta Provincial (Canada, 6/2018). [Zirconium and compounds as Zr] 15 min OEL: 10 mg/m ³ , (as Zr) 15 minutes. 8 hrs OEL: 5 mg/m ³ , (as Zr) 8 hours. CA British Columbia Provincial (Canada, 6/2022). [Zirconium and compounds as Zr] STEL: 10 mg/m ³ , (as Zr) 15 minutes. TWA: 5 mg/m ³ , (as Zr) 8 hours. CA Quebec Provincial (Canada, 6/2022). [Zirconium and compounds] STEV: 10 mg/m ³ , (as Zr) 15 minutes.

Section 8. Exposure controls/personal protection

Talc , not containing asbestiform fibres

TWAEV: 5 mg/m³, (as Zr) 8 hours.**CA Ontario Provincial (Canada, 6/2019).****[Zirconium and compounds as Z]**STEL: 10 mg/m³, (as Zr) 15 minutes.TWA: 5 mg/m³, (as Zr) 8 hours.**CA British Columbia Provincial (Canada, 6/2022).**TWA: 2 mg/m³ 8 hours. Form: Respirable**CA Ontario Provincial (Canada).**

TWA: 2 ppb Form: Respirable

TWA: 2 mg/m³ Form: Respirable**CA Quebec Provincial (Canada, 6/2022).**TWAEV: 2 mg/m³ 8 hours. Form:

Respirable dust.

CA Alberta Provincial (Canada, 6/2018).8 hrs OEL: 2 mg/m³ 8 hours. Form:

Respirable particulate

CA Ontario Provincial (Canada, 6/2019).TWA: 2 mg/m³ 8 hours. Form: Respirable particulate matter.**CA Saskatchewan Provincial (Canada, 7/2013).**TWA: 2 mg/m³ 8 hours. Form: respirable fraction

nonane

CA Alberta Provincial (Canada, 6/2018).**[Nonane all isomers]**8 hrs OEL: 1050 mg/m³ 8 hours.

8 hrs OEL: 200 ppm 8 hours.

CA British Columbia Provincial (Canada, 6/2022).

TWA: 200 ppm 8 hours.

CA Ontario Provincial (Canada, 6/2019).**[Nonane, all isomers]**

TWA: 200 ppm 8 hours.

CA Quebec Provincial (Canada, 6/2022).TWAEV: 1050 mg/m³ 8 hours.

TWAEV: 200 ppm 8 hours.

CA Saskatchewan Provincial (Canada, 7/2013). [Nonane all isomers]

STEL: 250 ppm 15 minutes.

TWA: 200 ppm 8 hours.

Solvent naphtha (petroleum), heavy arom.
calcium bis(2-ethylhexanoate)
2-butanone oxime

None.

None.

IPEL (-).

TWA: 3 ppm

STEL: 9 ppm

ethylbenzene

CA Alberta Provincial (Canada, 6/2018).15 min OEL: 543 mg/m³ 15 minutes.

15 min OEL: 125 ppm 15 minutes.

8 hrs OEL: 434 mg/m³ 8 hours.

8 hrs OEL: 100 ppm 8 hours.

CA British Columbia Provincial (Canada, 6/2022).

TWA: 20 ppm 8 hours.

CA Ontario Provincial (Canada, 6/2019).

Section 8. Exposure controls/personal protection

2-ethylhexanoic acid, cobalt salt

TWA: 20 ppm 8 hours.

CA Quebec Provincial (Canada, 6/2022).

TWAEV: 20 ppm 8 hours.

CA Saskatchewan Provincial (Canada, 7/2013).

STEL: 125 ppm 15 minutes.

TWA: 100 ppm 8 hours.

CA British Columbia Provincial (Canada, 6/2022). [cobalt and inorganic compounds as Co, Inhalable] Skin sensitizer. Inhalation sensitizer.

CA British Columbia Provincial (Canada, 6/2022). [Cobalt and inorganic compounds as Co, Total] Skin sensitizer. Inhalation sensitizer.

TWA: 0.02 mg/m³, (as Co, Total) 8 hours.

CA Quebec Provincial (Canada, 6/2022). [Cobalt elemental, and inorganic compounds] Skin sensitizer. Inhalation sensitizer.

TWAEV: 0.02 mg/m³, (as Co) 8 hours.

CA Ontario Provincial (Canada, 6/2019). [Cobalt and inorganic compounds as Co]


TWA: 0.02 mg/m³, (as Co) 8 hours.

CA Saskatchewan Provincial (Canada, 7/2013). [Cobalt and inorganic compounds as Co]

STEL: 0.06 mg/m³, (measured as Co) 15 minutes.

TWA: 0.02 mg/m³, (measured as Co) 8 hours.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures :  Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety glasses with side shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : For prolonged or repeated handling, use the following type of gloves:
- Recommended: neoprene, natural rubber (latex), nitrile rubber, polyvinyl alcohol (PVA), Viton®
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Various
- Odor** : Aromatic.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 44°C (111.2°F)
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Flammability** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Evaporation rate** : Not available.

Section 9. Physical and chemical properties

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.08

Density (lbs / gal) : 9.01

Solubility(ies) :

Media	Result
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cold water	Not soluble
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Partition coefficient: n-octanol/water : Not applicable.

Viscosity : Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)

Volatility : 46% (v/v), 34.478% (w/w)

% Solid. (w/w) : 65.522

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.
Refer to protective measures listed in sections 7 and 8.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), hydrodesulfurized heavy barium sulfate	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Solvent naphtha (petroleum), medium aliph.	LD50 Dermal	Rabbit	>3000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
iron hydroxide oxide yellow	LC50 Inhalation Dusts and mists	Rat	>5.05 mg/l	4 hours
	LD50 Oral	Rat	>10 g/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
2-ethylhexanoic acid, zirconium salt	LD50 Oral	Rat	>5 g/kg	-

Section 11. Toxicological information

nonane	LC50 Inhalation Gas.	Rat	3200 ppm	4 hours
	LC50 Inhalation Vapor	Rat	16790 mg/m ³	4 hours
Solvent naphtha (petroleum), heavy arom.	LC50 Inhalation Dusts and mists	Rat	>5.2 mg/l	4 hours
	LD50 Oral	Rat	>5 g/kg	-
2-butanone oxime	LD50 Dermal	Rabbit	1100 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Irritation/Corrosion

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitization

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethylbenzene	-	2B	-
2-ethylhexanoic acid, cobalt salt	-	2B	Reasonably anticipated to be a human carcinogen.

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), medium aliph.	Category 3	-	Narcotic effects
Talc, not containing asbestiform fibres	Category 3	-	Respiratory tract irritation
nonane	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), heavy arom.	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy	Category 1	-	central nervous system (CNS)
Solvent naphtha (petroleum), medium aliph.	Category 1	-	central nervous system (CNS)
ethylbenzene	Category 2	-	hearing organs

Target organs : Contains material which causes damage to the following organs: brain, skin.
Contains material which may cause damage to the following organs: kidneys, lungs, cardiovascular system, upper respiratory tract, eyes, central nervous system (CNS).

Aspiration hazard

Name	Result
Naphtha (petroleum), hydrodesulfurized heavy	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), medium aliph.	ASPIRATION HAZARD - Category 1
nonane	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary : There are no data available on the mixture itself. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Long term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMADUR ONE GREEN 4199	N/A	3597.9	56949.5	298.8	N/A
barium sulfate	N/A	2500	N/A	N/A	N/A
Solvent naphtha (petroleum), medium aliph.	N/A	2500	N/A	N/A	N/A
nonane	N/A	N/A	3200	16.79	N/A
2-butanone oxime	500	1100	N/A	N/A	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
2-ethylhexanoic acid, cobalt salt	500	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Iron hydroxide oxide yellow	Acute LC50 >100000 mg/l	Fish	96 hours
2-ethylhexanoic acid, zirconium salt	Acute LC50 >100 mg/l	Fish	96 hours
Solvent naphtha (petroleum), heavy arom.	NOEL 0.48 mg/l Fresh water	Daphnia	21 days
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	79 % - Readily - 10 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Nonane	5.65	-	High
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	-	High
2-butanone oxime	0.63	5.01	Low
ethylbenzene	3.6	79.43	Low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

Section 14. Transport information

	TDG	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	(Naphtha (petroleum), hydrodesulfurized heavy, Solvent naphtha (petroleum), medium aliph.)	(Naphtha (petroleum), hydrodesulfurized heavy, Solvent naphtha (petroleum), medium aliph.)	Not applicable.

Additional information

- TDG** : The marine pollutant mark is not required when transported by road or rail.
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

Proof of classification statement : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark).

Section 15. Regulatory information

National Inventory List

Canada inventory (DSL) : At least one component is not listed in DSL but all such components are listed in NDSL.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * Flammability : 2 Physical hazards : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Health : 3 Flammability : 2 Instability : 0

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Organization that prepared the SDS : EHS

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

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