SAFETY DATA SHEET

SIGMARINE 48 RED 6188



Date of issue 19 May 2025

Version 1.02

1. Product and company identification

Product name : SIGMARINE 48 RED 6188

Product code : 000010023021 Other means of : 00327586 identification

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's details : PPG PMC Japan Co., Ltd., 8F, Shintetsu Bldg., 1-1, Daikaidori 1-chome, Kobe

652-0803 Japan; Tel: +81-78-574-2777

Emergency telephone

number

: 078 574 2777

2. Hazards identification

GHS Classification : FLAMMABLE LIQUIDS - Category 3

SKIN IRRITATION - Category 2
CARCINOGENICITY - Category 1A

TOXIC TO REPRODUCTION - Category 1B

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -

Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD - Category 3

HAZARDOUS TO THE AQUATIC ENVIRONMENT - CHRONIC HAZARD -

Category 2

GHS label elements

Hazard pictograms









Signal word : Danger

Hazard statements : Flammable liquid and vapor.

Causes skin irritation.

May cause drowsiness or dizziness.

May cause cancer.

May damage fertility or the unborn child.

May cause damage to organs. (respiratory organs)

Causes damage to organs through prolonged or repeated exposure. (respiratory

Japan Page: 1/15

2. Hazards identification

Harmful to aquatic life.

Toxic to aquatic life with long lasting effects.

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. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response

: Collect spillage. IF exposed or concerned: Call a POISON CENTER or doctor. 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. If skin irritation occurs: Get medical advice or attention.

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

: Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Other hazards which do not : None known. result in classification

3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

CAS number : Not applicable. **CSCL** number : Not available.

| Ingredient name | % | CAS number | CSCL |
|--|-------------|-------------|----------------|
| Naphtha (petroleum), hydrodesulfurized heavy | 25 - <50 | 64742-82-1 | Not available. |
| Talc (containing no asbestos or quartz) | 3 - <5 | 14807-96-6 | Not available. |
| 2-ethylhexanoic acid, zirconium salt | 1 - <2 | 22464-99-9 | 2-615 |
| Ethyl Benzene | 0.5 - <1 | 100-41-4 | 3-28; 3-60 |
| Xylene | 0.2 - < 0.5 | 1330-20-7 | 3-3; 3-60 |
| Butan-2-one oxime | 0.2 - < 0.5 | 96-29-7 | 2-546 |
| 2-ethylhexanoic acid, cobalt salt | 0.2 - < 0.5 | 13586-82-8 | 2-615 |
| calcium bis(2-ethylhexanoate) | 0.2 - < 0.5 | 136-51-6 | 2-611 |
| Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine | 0.1 - <0.2 | 100545-48-0 | Not available. |
| Ethanol | 0.1 - < 0.2 | 64-17-5 | 2-202 |
| 2-ethylhexanoic acid | 0.1 - < 0.2 | 149-57-5 | 2-608 |

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.

SUB codes represent substances without registered CAS Numbers.

Japan Page: 2/15

Product name SIGMARINE 48 RED 6188

4. First aid measures

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.

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: May cause damage to organs following a single exposure in contact with skin.

Causes skin irritation.

Ingestion: May cause damage to organs following a single exposure if swallowed. Can cause

central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

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 redness

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

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.

Japan Page: 3/15

4. First aid measures

See toxicological information (Section 11)

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. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:

carbon oxides nitrogen 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.

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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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.

> Japan Page: 4/15

6. Accidental release measures

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 noncombustible, 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.

7. Handling and storage

Precautions for safe handling

: 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. Avoid release to the environment. 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 nonsparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

Conditions for safe storage: 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. See Section 10 for incompatible materials before handling or use.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Talc, not containing asbestiform fibres

Japan Society for Occupational Health (Japan, 5/2023) [Class 1 dusts (Activated charcoal, Alumina, Aluminium, Bentonite, Diatomite, Graphite, Kaolinite, Pagodite, Pyrites, Pyrite cinder)]

OEL-M 8 hours: 2 mg/m3. Form: Total dust (Class 1 Dust).

OEL-M 8 hours: 0.5 mg/m³. Form: Respirable dust (Class 1 Dust).

Japan Society for Occupational Health (Japan, 5/2023) Absorbed through skin.

ethylbenzene

Japan Page: 5/15 xylene

8. Exposure controls/personal protection

OEL-M 8 hours: 20 ppm. OEL-M 8 hours: 87 mg/m³.

Industrial Safety and Health Act (Japan,

6/2020)

TWA 8 hours: 20 ppm.

Japan Society for Occupational Health

(Japan, 5/2023)

OEL-M 8 hours: 50 ppm. OEL-M 8 hours: 217 mg/m³.

Industrial Safety and Health Act (Japan,

6/2020) [xylene]

TWA 8 hours: 50 ppm.

Japan Society for Occupational Health 2-ethylhexanoic acid, cobalt salt

(Japan, 5/2023) [Cobalt and compounds]

Inhalation sensitizer, Skin sensitizer. OEL-M 8 hours: 0.05 mg/m³ (as Co). **Technical Guideline Concerning the**

Applications, etc. of Concentration Standard for Preventing Health Hazards

(Japan, 6/2024)

TWA 8 hours: 5 mg/m³.

procedures

2-ethylhexanoic acid

Recommended monitoring: 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

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 protection Skin protection : Chemical splash goggles.

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: Chloroprene, nitrile rubber, neoprene

Japan Page: 6/15 Product code 000010023021

Date of issue 19 May 2025

Version 1.02

Product name SIGMARINE 48 RED 6188

8. Exposure controls/personal protection

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.

9. Physical and chemical properties

Appearance

Solubility(ies)

Physical state : Liquid. Color : Red. Odor : Aromatic.

: >37.78°C (>100°F) **Boiling point**

Flash point : Closed cup: 42°C (107.6°F)

Relative density : 0.97

Result Media cold water Not soluble

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.

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

Hazardous decomposition : Depending on conditions, decomposition products may include the following products

materials: carbon oxides nitrogen oxides halogenated compounds metal oxide/ oxides

> Japan Page: 7/15

11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|---------|--------------------------|----------|
| Naphtha (petroleum), hydrodesulfurized heavy | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| , | LD50 Oral | Rat | >5000 mg/kg | - |
| 2-ethylhexanoic acid, zirconium salt | LD50 Dermal | Rabbit | >5 g/kg | - |
| | LD50 Oral | Rat | >5 g/kg | - |
| Ethyl Benzene | LC50 Inhalation Vapor | Rat | 17.8 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 17.8 g/kg | - |
| | LD50 Oral | Rat | 3.5 g/kg | - |
| Xylene | LD50 Dermal | Rabbit | 1.7 g/kg | - |
| | LD50 Oral | Rat | 4.3 g/kg | - |
| Butan-2-one oxime | LD50 Dermal | Rabbit | 1100 mg/kg | - |
| | LD50 Oral | Rat | 100 mg/kg | - |
| Octadecanoic acid, | LC50 Inhalation Dusts and mists | Rat | 5.05 mg/l | 4 hours |
| 12-hydroxy-, reaction products with ethylenediamine | | | | |
| | LD50 Oral | Rat | >2000 mg/kg | _ |
| Ethanol | LC50 Inhalation Vapor | Rat | 124700 mg/m ³ | 4 hours |
| | LD50 Dermal | Rat | 17100 mg/kg | - |
| | LD50 Oral | Rat | 7 g/kg | - |
| 2-ethylhexanoic acid | LD50 Dermal | Rat | >2000 mg/kg | - |
| | LD50 Oral | Rat | 3640 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|--------------------|-------------|
| Xylene | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |

Sensitization

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|------------|-------------|
| Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine | skin | Guinea pig | Sensitizing |

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Japan Page: 8/15 Product code 000010023021 Date of issue 19 May 2025 Version 1.02
Product name SIGMARINE 48 RED 6188

11. Toxicological information

| Name | Category | Route of exposure | Target organs |
|--|------------|-------------------|--------------------|
| Naphtha (petroleum), hydrodesulfurized heavy | Category 3 | - | Narcotic effects |
| Talc (containing no asbestos or quartz) | Category 1 | - | respiratory organs |
| Ethyl Benzene | Category 3 | - | Respiratory tract |
| | | | irritation |
| - | Category 3 | - | Narcotic effects |
| Xylene | Category 1 | - | central nervous |
| | | | system (CNS), |
| | | | kidneys, liver, |
| | | | respiratory organs |
| - | Category 3 | - | Narcotic effects |
| Butan-2-one oxime | Category 3 | - | Narcotic effects |
| Ethanol | Category 3 | - | Respiratory tract |
| | | | irritation |
| - | Category 3 | - | Narcotic effects |
| 2-ethylhexanoic acid | Category 2 | - | respiratory system |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|--|------------|-------------------|------------------------------------|
| Naphtha (petroleum), hydrodesulfurized heavy | Category 1 | - | - |
| Talc (containing no asbestos or quartz) | Category 1 | - | respiratory organs |
| Ethyl Benzene | Category 1 | - | hearing organs, nervous system |
| Xylene | Category 1 | - | nervous system, respiratory organs |
| Butan-2-one oxime | Category 1 | - | haematopoietic system |
| Ethanol | Category 1 | - | liver |
| - | Category 2 | - | central nervous system (CNS) |

Aspiration hazard

| Name | Result |
|--|--------------------------------|
| Naphtha (petroleum), hydrodesulfurized heavy | ASPIRATION HAZARD - Category 1 |
| Ethyl Benzene | ASPIRATION HAZARD - Category 1 |
| Xylene | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure

: Not available.

Potential acute health effects

Eye contact

Skin contact

: No known significant effects or critical hazards.

Inhalation

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

: May cause damage to organs following a single exposure in contact with skin.

Causes skin irritation.

Ingestion

: May cause damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Japan Page: 9/15

Product name SIGMARINE 48 RED 6188

11. Toxicological information

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 redness

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

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

Short term exposure

Potential immediate

effects

: Not available.

Potential delayed effects: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure.

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) |
|--|------------------|-------------------|--------------------------------|----------------------------------|--|
| SIGMARINE 48 RED 6188 | N/A | 2839.9 | N/A | N/A | N/A |
| Naphtha (petroleum), hydrodesulfurized heavy | N/A | 2500 | N/A | N/A | N/A |
| Ethyl Benzene | 3500 | 17800 | N/A | 17.8 | N/A |
| Xylene | 4300 | 1700 | N/A | 11 | N/A |
| Butan-2-one oxime | 500 | 1100 | N/A | N/A | N/A |
| 2-ethylhexanoic acid, cobalt salt | 500 | N/A | N/A | N/A | N/A |
| Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine | 2500 | N/A | N/A | N/A | 5.05 |
| Ethanol | 7000 | 17100 | N/A | 124.7 | N/A |
| 2-ethylhexanoic acid | 3640 | 1100 | N/A | N/A | N/A |

Japan Page: 10/15

Date of issue 19 May 2025 Version 1.02

Product name SIGMARINE 48 RED 6188

11. Toxicological information

Other information

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.

12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|--|---|----------------------------------|
| 2-ethylhexanoic acid, zirconium salt | Acute LC50 >100 mg/l | Fish | 96 hours |
| Ethyl Benzene | Acute EC50 1.8 mg/l Fresh water Chronic NOEC 1 mg/l Fresh water | Daphnia Daphnia - Ceriodaphnia dubia | 48 hours |
| Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine | Acute EC50 >100 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| Ethanol | Acute EC50 >10 mg/l Acute LC50 >10 mg/l Acute EC50 7640 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> Fish - <i>Oncorhynchus mykiss</i> Daphnia - <i>Daphnia magna</i> | 48 hours 96 hours 48 hours |

Persistence/degradability

| Caryloricalamine | 1000 | | | | 1 | |
|---|---|-------------|----------------|------|---|----------|
| 12-hydroxy-, reaction products with ethylenediamine | Biodegradability - Closed Bottle Test | | | | | |
| Octadecanoic acid, | Ready | 22 % - 28 d | ays | - | | - |
| Ethyl Benzene | - | | dily - 10 days | - | | - |
| Product/ingredient name | Test | Result | | Dose | | Inoculum |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| Ethyl Benzene | - | - | Readily |
| Xylene | - | - | Readily |
| Octadecanoic acid, | - | - | Inherent |
| 12-hydroxy-, reaction | | | |
| products with | | | |
| ethylenediamine | | | |
| Ethanol | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|-------------------------|--------|-------------|-----------|
| Naphtha (petroleum), | - | 10 to 2500 | High |
| hydrodesulfurized heavy | | | |
| Ethyl Benzene | 3.6 | 79.43 | Low |
| Xylene | 3.12 | 7.4 to 18.5 | Low |
| Butan-2-one oxime | 0.63 | 5.01 | Low |
| Octadecanoic acid, | >5.86 | - | High |
| 12-hydroxy-, reaction | | | |
| products with | | | |
| ethylenediamine | | | |
| Ethanol | -0.35 | - | Low |
| 2-ethylhexanoic acid | 2.7 | - | Low |

Mobility in soil

Japan Page: 11/15

Product name SIGMARINE 48 RED 6188

12. Ecological information

Soil/Water partition coefficient

: Not available.

Mobility : Not available.

Other adverse effects: No known significant effects or critical hazards.

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.

14. Transport information

| | UN | 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. The environmentally hazardous substance mark is not required. | Yes. | Yes. The environmentally hazardous substance mark is not required. |
| Marine pollutant substances | Not applicable. | (Naphtha (petroleum), hydrodesulfurized heavy) | Not applicable. |

Additional information

UN : None identified.

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.

Japan Page: 12/15

Product code 000010023021 Date of issue 19 May 2025 Version 1.02
Product name SIGMARINE 48 RED 6188

14. Transport information

Transport in bulk according : Not applicable. to IMO instruments

15. Regulatory information

Fire Service Law

| Category | Substance name/Type | Danger category | Signal word | Designated quantity |
|-------------|---------------------|-----------------|----------------------------|---------------------|
| Category IV | Class II petroleums | III | Flammable - Keep Fire Away | 1000 L |

Pollutant Release and Transfer Registers (PRTR)

None of the components are listed.

Industrial Safety and Health Act

Ordinance on the Prevention of the Hazard due to Specified Chemical Substances

None of the components are listed.

Substance(s) requiring labelling

| Ingredient name | % | Status | Reference number |
|-----------------------------------|-----------|--------|------------------|
| Petroleum naphtha | ≥40 - ≤50 | Listed | 330 |
| Zirconium compounds | ≤10 | Listed | 313 |
| Ethylbenzene | ≤10 | Listed | 70, 2-247 |
| | | | (2025-04) |
| Xylene | ≤10 | Listed | 136, 2-426 |
| | | | (2025-04) |
| Cobalt and its compounds | ≤10 | Listed | 172 |
| Cobalt and its compounds(2025-04) | ≤10 | Listed | 12 |
| | | | (2025-04) |
| Ethanol | ≤10 | Listed | 61, 2-205 |
| | | | (2025-04) |

Chemicals requiring notification

| Ingredient name | % | Status | Reference number |
|-----------------------------------|-----------|--------|-------------------------|
| Petroleum naphtha | ≥40 - ≤50 | Listed | 330 |
| Zirconium compounds | ≤10 | Listed | 313 |
| Ethylbenzene | ≤10 | Listed | 70, 2-247 (2025-04) |
| Xylene | ≤10 | Listed | 136, 2-426 (2025-04) |
| Butan-2-one oxime(2025-04) | ≤10 | Listed | 2-1721 (2025-04) |
| Cobalt and its compounds | ≤10 | Listed | 172 ´ |
| Cobalt and its compounds(2025-04) | ≤10 | Listed | 12 (2025-04) |
| Ethanol | ≤10 | Listed | 61, 2-205 (2025-04) |
| 2-Ethylhexanoic acid | ≤10 | Listed | 69, 2-243 (2025-04) |

Carcinogens based on Article 577-2 of the Ordinance on ISH

None of the components are listed.

Mutagen

| | Japan | Page: 13/15 |
|--|-------|-------------|
|--|-------|-------------|

Product code 000010023021 Date of issue 19 May 2025 Version 1.02

Product name SIGMARINE 48 RED 6188

15. Regulatory information

None of the components are listed.

Corrosive liquid : Not listed **Occupational Safety and** : Inflammable

: Not listed

: Inflammable

Health Law

Regulations on the

Prevention of Tetraalkyl

Lead Poisoning

Harmful Substances : Not listed

Subject to Obtaining Permission for Manufacturing

Harmful Substances, : Not listed

Prohibited for Manufacturing

ISHL Enforcement Order

Appendix 1 - Dangerous

Substances

Lead regulation : Not listed **Organic solvents** : Not applicable.

poisoning prevention

Poisonous and Deleterious Substances

None of the components are listed.

Chemical Substances Control Law (CSCL)

| Ingredient name | % | Status | Reference number |
|-------------------|-----|---------------------|------------------|
| Ethylbenzene | ≤10 | Priority assessment | 50 |
| Xylene | ≤10 | Priority assessment | 125 |
| Butan-2-one oxime | ≤10 | Priority assessment | 262 |

High Pressure Gas Control : Not available.

Law

Explosives Control Law

None of the components are listed.

Law concerning prevention : Not available.

of pollution of the ocean

Maritime Safety Law

Notification Regulating Transportation of Dangerous Materials by Sea

None of the components are listed.

Container class

None of the components are listed.

JSOH Carcinogen : Group 2B **List of Specially Controlled** : Not listed

Industrial Waste

: All components are listed or exempted. Japan inventory

Japan Page: 14/15

Product name SIGMARINE 48 RED 6188

15. Regulatory information

Road law : Not available.

16. Other information

History

Date of issue/Date of

revision

Prepared by

: 19 May 2025

: EHS

Date of previous issue : 5/15/2025 **Version** : 1.02

Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous

Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association 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)

RID = The Regulations concerning the International Carriage of Dangerous Goods

by Rail

UN = United Nations

▼ Indicates information that has changed from previously issued version.

Notice to reader

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Japan Page: 15/15