

SAFETY DATA SHEET

STEELGUARD 651 WHITE



Date of issue 3 July 2025

Version 1.01

1. Product and company identification

Product name : STEELGUARD 651 WHITE
Product code : 000010024373
Other means of identification : 00445093; 00478272
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 : CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure. (respiratory organs, urinary tract)

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

2. Hazards identification

Other hazards which do not result in classification : Contains isothiazolinones. May cause allergic reaction.

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 |
|---|------------|------------|----------------|
| Titanium dioxide (excluding nanoparticle) | 10 - <12.5 | 13463-67-7 | 1-558; 5-5225 |
| Melamine | 7 - <10 | 108-78-1 | 5-1024 |
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | 1 - <2 | 25265-77-4 | 2-4161 |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | 0.1 - <0.2 | 64742-65-0 | Not available. |
| 9(or 10)-sulphooctadecanoic acid, potassium salt | 0.1 - <0.2 | 67968-63-2 | 2-1655 |
| propylidynetrimethanol | 0.1 - <0.2 | 77-99-6 | 2-245 |
| Titanium dioxide (excluding nanoparticle) | 0.1 - <0.2 | 13463-67-7 | 1-558; 5-5225 |

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.

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.
- 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** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
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.

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. 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).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. 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.

6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. 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.

7. Handling and storage

Precautions for safe handling : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage : Store between the following temperatures: 5 to 35°C (41 to 95°F). Store in accordance with local regulations. 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. 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

| | |
|---|--|
| titanium dioxide | <p>Japan Society for Occupational Health (Japan, 5/2023) [titanium dioxide] OEL-M 8 hours: 1.5 mg/m³ (as Ti). Form: Respirable particulate matter. OEL-M 8 hours: 2 mg/m³ (as Ti). Form: Total particulate matter.</p> <p>Japan Society for Occupational Health (Japan, 5/2023) [titanium dioxide (nanoparticle)] OEL-M 8 hours: 0.3 mg/m³. Form: nanoparticle.</p> |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | <p>Japan Society for Occupational Health (Japan, 5/2023) [Oil mist, mineral] OEL-M 8 hours: 3 mg/m³. Form: Mist.</p> <p>Japan Society for Occupational Health (Japan, 5/2023) [titanium dioxide] OEL-M 8 hours: 1.5 mg/m³ (as Ti). Form: Respirable particulate matter. OEL-M 8 hours: 2 mg/m³ (as Ti). Form: Total particulate matter.</p> <p>Japan Society for Occupational Health (Japan, 5/2023) [titanium dioxide]</p> |
| titanium dioxide (<10 microns) | |

8. Exposure controls/personal protection

(nanoparticle)]

OEL-M 8 hours: 0.3 mg/m³. Form:
nanoparticle.

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 : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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 : 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.

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.

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

Physical state : Liquid.

Odor : Characteristic.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: Not applicable.

Relative density : 1.42

9. Physical and chemical properties

| Solubility(ies) | : | Media | Result |
|-----------------|---|------------|-------------------|
| | | cold water | Partially 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.

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 metal oxide/oxides

11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|---------|-------------------------|----------|
| Titanium dioxide (excluding nanoparticle) | LC50 Inhalation Dusts and mists | Rat | >6.82 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| Melamine | LD50 Oral | Rat | >5000 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >5190 mg/m ³ | 4 hours |
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | LD50 Oral | Rat | 3161 mg/kg | - |
| | LD50 Dermal | Rabbit | >15.2 g/kg | - |
| Distillates (petroleum), solvent-dewaxed heavy paraffinic | LD50 Oral | Rat | 6.5 g/kg | - |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| propylidynetrimethanol | LD50 Oral | Rat | >5000 mg/kg | - |
| | LD50 Dermal | Rabbit | 10 g/kg | - |
| Titanium dioxide (excluding nanoparticle) | LD50 Oral | Rat | 14000 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >6.82 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

11. Toxicological information

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|---|------------|-------------------|--------------------|
| Titanium dioxide (excluding nanoparticle) | Category 1 | - | respiratory organs |
| Melamine | Category 1 | - | urinary tract |
| Titanium dioxide (excluding nanoparticle) | Category 1 | - | respiratory organs |

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

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 effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

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

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

11. Toxicological information

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

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) |
|---|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| STEELGUARD 651 WHITE | 16118.1 | N/A | N/A | N/A | N/A |
| Melamine | 3161 | N/A | N/A | N/A | N/A |
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | 6500 | N/A | N/A | N/A | N/A |
| propylidynetrimethanol | 14000 | 10000 | N/A | N/A | N/A |

Other information :

Contains isothiazolinones. May cause allergic reaction.

12. Ecological information

Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|----------------------------------|--------------------------------|----------|
| Titanium dioxide (excluding nanoparticle) | Acute LC50 >100 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> | 48 hours |
| Melamine | Acute EC50 200 mg/l | Daphnia | 48 hours |
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | Acute LC50 33 mg/l | Fish | 96 hours |
| propylidynetrimethanol | Acute LC50 >1000 mg/l | Fish | 96 hours |
| Titanium dioxide (excluding nanoparticle) | Acute LC50 >100 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> | 48 hours |

Persistence/degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|-----------|---------------------------|------|----------|
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | OECD 301B | >76 % - Readily - 28 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|-------------------|------------|------------------|
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-----|-----------|
| Melamine | -1.22 | 3.8 | Low |
| 2,2,4-trimethylpentane-1,3-diol monoisobutyrate | 3.2 | - | Low |
| propylidynetrimethanol | -0.47 | - | Low |

Mobility in soil

Soil/Water partition coefficient : Not available.

Mobility : Not available.

12. Ecological information

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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

| | UN | IMDG | IATA |
|-----------------------------|-----------------|-----------------|-----------------|
| UN number | Not regulated. | Not regulated. | Not regulated. |
| UN proper shipping name | - | - | - |
| Transport hazard class(es) | - | - | - |
| Packing group | - | - | - |
| Environmental hazards | No. | No. | No. |
| Marine pollutant substances | Not applicable. | Not applicable. | Not applicable. |

Additional information

UN : None identified.
IMDG : None identified.
IATA : None identified.

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.

15. Regulatory information

Fire Service Law

None of the components are listed.

Pollutant Release and Transfer Registers (PRTR)

| Ingredient name | | | |
|-------------------------------|-----|---------|-----|
| 1,3,5-Triazine-2,4,6-triamine | 8.2 | Class 1 | 682 |

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 |
|--|-----------|--------|----------------------|
| Titanium(IV) oxide | ≥10 - ≤20 | Listed | 191, 2-623 (2025-04) |
| 1,3,5-Triazine-2,4,6-triamine(2025-04) | ≤10 | Listed | 2-1330 (2025-04) |
| 2,2,4-Trimethylpentane-1,3-diol monoisobutyrate(2026-04) | ≤10 | Listed | 2-1429 (2026-04) |

Chemicals requiring notification

| Ingredient name | % | Status | Reference number |
|--|-----------|--------|----------------------|
| Titanium(IV) oxide | ≥10 - ≤20 | Listed | 191, 2-623 (2025-04) |
| 1,3,5-Triazine-2,4,6-triamine(2025-04) | ≤10 | Listed | 2-1330 (2025-04) |
| 2,2,4-Trimethylpentane-1,3-diol monoisobutyrate(2026-04) | ≤10 | Listed | 2-1429 (2026-04) |
| Mineral oil | ≤10 | Listed | 168, 2-581 (2025-04) |

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

None of the components are listed.

Mutagen

None of the components are listed.

Corrosive liquid : Not listed

Occupational Safety and Health Law : Inflammable

Regulations on the Prevention of Tetraalkyl Lead Poisoning : Not listed

Harmful Substances Subject to Obtaining Permission for Manufacturing : Not listed

Harmful Substances, Prohibited for Manufacturing : Not listed

15. Regulatory information

ISHL Enforcement Order : Inflammable
Appendix 1 - Dangerous Substances

Lead regulation : Not listed

Organic solvents poisoning prevention : Not applicable.

Poisonous and Deleterious Substances

None of the components are listed.

Chemical Substances Control Law (CSCL)

| Ingredient name | % | Status | Reference number |
|-----------------|-----|---------------------|------------------|
| 1,4-Dioxane | ≤10 | Priority assessment | 80 |
| Formaldehyde | ≤10 | Priority assessment | 25 |
| Acetaldehyde | ≤10 | Priority assessment | 26 |
| Ethylene oxide | ≤10 | Priority assessment | 19 |

High Pressure Gas Control Law : Not available.

Explosives Control Law

None of the components are listed.

Law concerning prevention of pollution of the ocean : Not available.

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 1

List of Specially Controlled Industrial Waste : Not listed

Japan inventory : At least one component is not listed.

Road law : Not available.

16. Other information

History

Date of issue/Date of revision : 3 July 2025

Date of previous issue : 4/20/2025

Version : 1.01

Prepared by : EHS

16. Other information

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.