SAFETY DATA SHEET

pPG

Page: 1/13

Viet Nam

Date of issue/Date of revision 18 September 2024 Version1.01

Section 1. Identification

 : 00468619 : STEELGUARD 951 HARDENER BLACK : Not applicable. : Mixture. : Liquid.
Not applicable.Mixture.
: Mixture.
: Liquid.
of the substance or mixture and uses advised against
 Coating. Professional applications, Used by spraying.
: Product is not intended, labelled or packaged for consumer use.
: PPG Yung Chi Coatings Co. Ltd Lot 219, Amata Street, Long Binh IZ Bien Hoa City, Dong Nai Province Vietnam Tel : +84 61 3936121/22
: CHEMTREC +(84)-444581938 (CCN 17704)

Section 2. Hazards identification

Classification of the	: ACUTE TOXICITY (oral) - Category 5
substance or mixture	ACUTE TOXICITY (dermal) - Category 5
	SKIN CORROSION - Category 1B
	SERIOUS EYE DAMAGE - Category 1
	SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2
	TOXIC TO REPRODUCTION - Category 2
	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
	AQUATIC TOXICITY (CHRONIC) - Category 3 Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity:
	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 58.4%
	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4.1%
GHS label elements	
Hazard pictograms	
Signal word	: Danger
_	-

Product name STEELGUARD 951 HARDENER BLACK

Section 2. Hazards identification

Hazard statements	:	May be harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. (urinary system) Harmful 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. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Response	:	IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage	1	Store locked up.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Routes of entry	:	Not available.
Other hazards which do not	:	Causes digestive tract burns.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

CAS number/other identifiers

CAS number	: Not applicable.
EC number	: Mixture.

Ingredient name	CAS number	Chemical formula	%
Relamine Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine m-phenylenebis(methylamine) 3,6-diazaoctanethylenediamin carbon	108-78-1 68082-29-1 1477-55-0 112-24-3 7440-44-0	C3-H6-N6 (C6H18N4. Unspecified. Unspecified)x C8-H12-N2 C6-H18-N4 C	≥50 - ≤60 ≥10 - ≤24 ≥10 - ≤18 ≤2.4 ≤3

There are no 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.

SUB codes represent substances without registered CAS Numbers.

Section 3. Composition/information on ingredients

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

Section 4. First aid measures

Description of necessary	<u>r first aid measures</u>
Eye contact	 Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
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 symptom	is/effects, acute and delayed
Potential acute health e	ffects
Eye contact	: Causes serious eye damage.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Causes severe burns. May be harmful in contact with skin. May cause an allergic skin reaction.
Ingestion	: May be harmful if swallowed. Corrosive to the digestive tract. Causes burns.
<u>Over-exposure signs/sy</u>	v <u>mptoms</u>
Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
Indication of immediate I	nedical 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.

Section 4. First aid measures

itable training. If it r an appropriate is to the person minated clothing
r Is

See toxicological information (Section 11)

Section 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. This material is harmful 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.
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. Do not breathe 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.

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

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.
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.

Section 7. Handling and storage

Precautions for safe handling : Put on appropriate personal protective equipment (see Section 8). Persons with a **Protective measures** history of skin sensitization problems should not be employed in any process in which this product is used. 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. 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. 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. Advice on general Eating, drinking and smoking should be prohibited in areas where this material is 5 occupational hygiene 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. **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 original container protected from direct including any sunlight in a dry, cool and well-ventilated area, away from incompatible materials incompatibilities (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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name			Exposure limits
m-phenylenebis(methylamine	;)		ACGIH TLV (United States, 7/2023). Absorbed through skin. C: 0.018 ppm Ministry of Health (Viet Nam, 6/2019). [bui graphit] TWA: 1 mg/m ³ 8 hours. Form: respirable dust TWA: 2 mg/m ³ 8 hours. Form: total dust concentration
Recommended monitoring procedures	:		riate monitoring standards. Reference to hods for the determination of hazardous
Appropriate engineering controls	:		es, gas, vapor or mist, use process enclosures, neering controls to keep worker exposure to ommended or statutory limits.
Environmental exposure controls	:		
Individual protection measur	<u>es</u>		
Hygiene measures	:	eating, smoking and using the lavator Appropriate techniques should be use Contaminated work clothing should no	bughly after handling chemical products, before y and at the end of the working period. ed to remove potentially contaminated clothing. of be allowed out of the workplace. Wash Ensure that eyewash stations and safety location.
Eye/face protection	:	Chemical splash goggles and face sh	ield.
Skin protection			
Hand protection	:	be worn at all times when handling ch this is necessary. Considering the pa check during use that the gloves are s should be noted that the time to break	s complying with an approved standard should emical products if a risk assessment indicates rameters specified by the glove manufacturer, still retaining their protective properties. It through for any glove material may be rers. In the case of mixtures, consisting of ne of the gloves cannot be accurately
Gloves	:	nitrile neoprene	
Body protection	:		body should be selected based on the task d and should be approved by a specialist
Other skin protection	:		nal skin protection measures should be formed and the risks involved and should be ing this product.

Section 8. Exposure controls/personal protection

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	1	Not available.	
Odor	1	Characteristic.	
Odor threshold	1	Not available.	
рН	1	Not applicable.	
Melting point	1	Not available.	
Boiling point	1	>37.78°C (>100°F)	
Flash point	1	Closed cup: Not applicable.	
Evaporation rate	1	Not available.	
Flammability (solid, gas)	1	Not available.	
Lower and upper explosive (flammable) limits	:	Greatest known range: Lower: 1.1% Upper: 6.4% (3,6-diazaoctanethylenediamin)	
Vapor pressure	1	Not available.	
Vapor density	1	Not available.	
Relative density	1	1.28	
Solubility(ies)		Media Result	
oolubility(ics)	1	cold water Not soluble	
Partition coefficient: n- octanol/water	:	Not applicable.	
Auto-ignition temperature	1	Not available.	
Decomposition temperature	1	Not available.	
Viscosity	1	Kinematic (40°C): >21 mm²/s	

Section 10. Stability and reactivity

	Viet Nam Page: 7/13
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Chemical stability	: The product is stable.
Reactivity	: No specific test data related to reactivity available for this product or its ingredients.

Date of issue 18 September 2024

Version 1.01

Product name STEELGUARD 951 HARDENER BLACK

Section 10. Stability and reactivity

Hazardous	decomposition
products	

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
melamine	LC50 Inhalation Dusts and mists	Rat	>5190 mg/m ³	4 hours
	LD50 Oral	Rat	3161 mg/kg	-
Fatty acids, C18-unsatd.,	LD50 Dermal	Rat	>2000 mg/kg	-
dimers, oligomeric reaction products with tall-oil fatty				
acids and				
triethylenetetramine				
	LD50 Oral	Rat	>2000 mg/kg	-
m-phenylenebis (methylamine)	LC50 Inhalation Gas.	Rat	700 ppm	1 hours
	LD50 Dermal	Rat - Male, Female	>3100 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
3,6-diazaoctanethylenediamin	LD50 Dermal	Rabbit	1465 mg/kg	-
	LD50 Oral	Rat	1716 mg/kg	-

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Atty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Eyes - Severe irritant	Rabbit	-	-	-
m-phenylenebis (methylamine)	Skin - Irritant Skin - Severe irritant	Human Rat	- -	- 4 hours	- 4 hours

Conclusion/Summary

: There are no data available on the mixture itself.

: There are no data available on the mixture itself.

Respiratory

Skin

Eyes

: There are no data available on the mixture itself.

Sensitization

Product/ingredient name	Route of exposure	Species	Result	
Atty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	skin	Mouse	Sensitizing	
m-phenylenebis (methylamine)	skin	Mouse	Sensitizing	
3,6-diazaoctanethylenediamin	skin	Guinea pig	Sensitizing	

Product name STEELGUARD 951 HARDENER BLACK

Section 11. Toxicological information

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.
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		Route of exposure	Target organs
carbon	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
melamine	Category 2	-	urinary system

Aspiration hazard

Not available.

Information on the likely : Not available. routes of exposure

Potential acute health effects

Eye contact	: Causes serious eye damage.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Causes severe burns. May be harmful in contact with skin. May cause an allergic skin reaction.
Ingestion	: May be harmful if swallowed. Corrosive to the digestive tract. Causes burns.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain watering redness
Inhalation	: Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

Product name STEELGUARD 951 HARDENER BLACK

Section 11. Toxicological information

Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations
Delayed and immediate effect	ts and also chronic effects from short and long term exposure
<u>Short term exposure</u>	
Potential immediate effects	: There are no data available on the mixture itself.
Potential delayed effects	: There are no data available on the mixture itself.
<u>Long term exposure</u>	
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 eff	ects
General	: May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
	2224.51 mg/kg 2462.34 mg/kg 13068.63 ppm

Other information

Causes digestive tract burns. Exposure to amine vapor has been reported to cause transient corneal edema described as blue haze, halo effect, foggy or blurred vision for several hours. This condition is typically temporary and does not cause permanent visual effects. When the proper eye protection specified in Section 8 is worn, exposure is significantly reduced and the condition has not been observed.

Date of issue 18 September 2024

Product name STEELGUARD 951 HARDENER BLACK

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Felamine Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Acute EC50 200 mg/l EC10 1.78 mg/l	Daphnia Algae	48 hours 72 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
melamine	-1.22	3.8	Low
m-phenylenebis	0.18	2.69	Low
(methylamine)			
3,6-diazaoctanethylenediamin	-1.66 to -1.4	-	Low

Mobility in soil

Soil/water partition : Not available. coefficient (Koc)

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal of this product, solutions and any by-products should at all times with the requirements of environmental protection and waste disposal legi- any regional local authority requirements. Dispose of surplus and non-rec products via a licensed waste disposal contractor. Waste should not be d untreated to the sewer unless fully compliant with the requirements of all a with jurisdiction. Waste packaging should be recycled. Incineration or lan should only be considered when recycling is not feasible. This material ar container must be disposed of in a safe way. Care should be taken when emptied containers that have not been cleaned or rinsed out. Empty conta liners may retain some product residues. Avoid dispersal of spilled materi runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN3066	UN3066	UN3066
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	8	8	8
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information		
UN	: None identified.	
IMDG	: None identified.	
ΙΑΤΑ	: 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 : Not applicable. to IMO instruments

Section 15. Regulatory information

: No known specific national and/or regional regulations applicable to this product Safety, health and environmental regulations (including its ingredients). specific for the product **Toxic classification (TCVN** : 3 3164-79)

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Section 16. Other information

History

Date of issue/Date of revision	: 18 September 2024
Date of previous issue	: 2/27/2024
Version	: 1.01

Section 16. Other information

Prepared by	: 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 = International Air Transport Association IBC = 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) UN = United Nations
References	: Not available.

✓ 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.