SAFETY DATA SHEET



Date of issue 1/12/2024 (month/day/year)

Version 3.02

Section 1. Chemical product and company identification

Α.	Product name	1	AMERLOCK 600 WHITE RESIN
	Product code	4	00436674

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

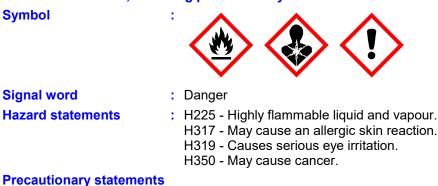
Product use	: Professional applications, Used by spraying.
Use of the substance/ mixture	: Coating.
Uses advised against	: Product is not intended, labelled or packaged for consumer use.
C. Supplier's or Importer's information	: PPG SSC (680-090) 19, Yeocheon-ro 217beon-gil, Nam-gu, Ulsan, Korea Tel: +82-52-210-8222 Koroa MSDS@PPG COM
Email Address	Korea.MSDS@PPG.COM
Emergency telephone number:	: +82-52-210-8222

Section 2. Hazards identification

A. Hazard classification : FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SKIN SENSITISATION - Category 1 CARCINOGENICITY - Category 1A

This product is classified in accordance with the Industrial Safety and Health Act and the Chemical Control Act.

B. GHS label elements, including precautionary statements



Product name AMERLOCK 600 WHITE RESIN

Section 2. Hazards identification

Prevention	 P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P261 - Avoid breathing vapour.
Response	 P308 + P313 - IF exposed or concerned: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: P403 + P235 - Store in a well-ventilated place. Keep cool.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not result in	: Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

CAS number/other identifiers

CAS number

classification

С

: Not applicable.

Chemical name	Common name	Identifiers	%
titanium dioxide	TITANIUM DIOXIDE	CAS: 13463-67-7	10 -<20
Cashew, nutshell liq., 2-hydroxyethyl	2-HYDROXYETHYL ETHERS OF	CAS: 232268-65-4	10 -<20
ethers	CASHEW NUTSHELL LIQUID		
4-methylpentan-2-one	4-METHYLPENTAN-2-ONE / METHYL	CAS: 108-10-1	5 - <10
	ISOBUTYL KETONE		
butan-1-ol	1-BUTANOL	CAS: 71-36-3	1 - <5
crystalline silica, respirable powder (<10 microns)	QUARTZ (<10 microns)	CAS: 14808-60-7	0.1 - <1

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

A. 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.

- **B. Skin contact**
- : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Section 4. First aid measures

C.	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.
D.	Ingestion	:	If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
Е.	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. Firefighting measures

Α.	Extinguishing media		
	Suitable extinguishing media	1	Use dry chemical, CO ₂ , water spray (fog) or foam.
	Unsuitable extinguishing media	1	Do not use water jet.
В.	Specific hazards arising from the chemical	:	Highly flammable liquid and vapour. 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 metal oxide/oxides
C.	Special equipment for fire-fighting	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Fire-fighting procedures	:	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.

Section 6. Accidental release measures

A. Personal precautions,	4	No action shall be taken involving any personal risk or without suitable training.
protective equipment and		Evacuate surrounding areas. Keep unnecessary and unprotected personnel from
emergency procedures		entering. Do not touch or walk through spilt material. Shut off all ignition sources.
		No flares, smoking or flames in hazard area. Avoid breathing vapour or mist.
		Provide adequate ventilation. Wear appropriate respirator when ventilation is
		inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

B. Environmental	: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains
precautions	and sewers. Inform the relevant authorities if the product has caused environmental
-	pollution (sewers, waterways, soil or air).

C. Methods and material 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 the 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 spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

A. Precautions for safe Put on appropriate personal protective equipment (see Section 8). Persons with a 2 handling 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. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. 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.

B. 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 oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

A. Occupational exposure limits

А.			5	
	Ingredient name			Exposure limits
	titanium dioxide			Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 10 mg/m ³ 8 hours. Form: total dust with less than 1% of free SiO2
	4-methylpentan-2-one			Ministry of Employment and Labor (Republic of Korea, 1/2020). STEL: 75 ppm 15 minutes. TWA: 50 ppm 8 hours.
	butan-1-ol			Ministry of Employment and Labor (Republic of Korea, 1/2020). Absorbed through skin. TWA: 20 ppm 8 hours.
	crystalline silica, respirable	e po	owder (<10 microns)	Ministry of Employment and Labor (Republic of Korea, 1/2020). TWA: 0.05 mg/m ³ 8 hours. Form: Respirable fraction
	Recommended monitoring procedures	:		iate monitoring standards. Reference to ods for the determination of hazardous
в.	Appropriate engineering controls	:		s to keep worker exposure to airborne d or statutory limits. The engineering controls concentrations below any lower explosive
	Environmental exposure controls	:		
c.	Personal protective equi	pme	ent	
	Respiratory protection		hazards of the product and the safe w workers are exposed to concentration appropriate, certified respirators. Use respirator complying with an approved necessary.	n known or anticipated exposure levels, the vorking limits of the selected respirator. If is above the exposure limit, they must use a properly fitted, air-purifying or air-fed d standard if a risk assessment indicates this is
	Eye protection	1	Chemical splash goggles.	
	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
	Cloves	÷ .	butyl rubber	

Gloves

: butyl rubber

Section 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.
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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

В. С. D. Е. F.	range Flash point Evaporation rate Flammability (solid, gas)		Liquid. White. Characteristic. Not available. Not available. >37.78°C (>100°F) Closed cup: 19°C (66 Not available. Not available. Greatest known rang	,	1.4% U	pper: 11.3%	(butan-1	-ol)	
K.	Vapour pressure	-	Ingredient name 4-methylpentan-2-one	mm Hg	r Pressi kPa 2.1	ure at 20°C Method	Vap mm Hg	our press kPa	sure at 50°C Method
к. L. N. О.		:		mm Hg 15.75128 Re	kPa	Method	mm		

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Section 9. Physical and chemical properties

Ingredient name	°C	°F	Method	
butan-1-ol	355	671	EU A.15	

Q. Decomposition temperature : Not available. R. Viscosity Flow time (ISO 2431) : Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt) S. Molecular weight : Not available.

Section 10. Stability and reactivity

Α.	Chemical stability	:	The product is stable.
	Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
В.	Conditions to avoid	:	When exposed to high temperatures may produce hazardous decomposition products.
C.	Incompatible materials	:	Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
D.	Hazardous decomposition products	:	Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides metal oxide/oxides

Section 11. Toxicological information

Α.	Information on likely ro of exposure	outes : Not available.
<u>P</u>	otential acute health eff	<u>ects</u>
	Inhalation	: No known significant effects or critical hazards.
	Ingestion	: No known significant effects or critical hazards.
	Skin contact	: Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
	Eye contact	: Causes serious eye irritation.
<u>0</u>	ver-exposure signs/syn	<u>iptoms</u>
	Inhalation	: No specific data.
	Ingestion	: No specific data.
	Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
	Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness

B. Health hazards

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
4-methylpentan-2-one	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	2.08 g/kg	-
butan-1-ol	LC50 Inhalation Vapour	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
Conclusion/Summary : The	ere are no data available on the mixt	ure itself.		
······				
rritation/Corrosion				
Conclusion/Summary				

<u>conclusion/summary</u>	
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.
<u>Sensitisation</u> <u>Conclusion/Summary</u>	
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	Classification	Route of exposure	Target organs
4-methylpentan-2-one	Category 3		Respiratory tract irritation
butan-1-ol	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure) Not available.

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Section 11. Toxicological information

Aspiration hazard

Not available.

Potential chronic health effects

General	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity Mutagenicity Reproductive toxicity	 May cause cancer. Risk of cancer depends on duration and level of exposure. No known significant effects or critical hazards. No known significant effects or critical hazards.

Additional information

Prolonged or repeated contact may dry skin and cause irritation. 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 vapour/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.

Chemical name	Identifiers	GHS Classification
titanium dioxide	CAS: 13463-67-7	CARCINOGENICITY - Category 2
Cashew, nutshell liq., 2-hydroxyethyl ethers	CAS: 232268-65-4	ACUTE TOXICITY (dermal) - Category 4
4-methylpentan-2-one	CAS: 108-10-1	EYE IRRITATION - Category 2A SKIN SENSITISATION - Category 1B FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2
		SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE
butan-1-ol	CAS: 71-36-3	EXPOSURE (Narcotic effects) - Category 3 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE
		EXPOSURE (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
crystalline silica, respirable powder (<10 microns)	CAS: 14808-60-7	CARCINOGENICITY - Category 1A

Section 12. Ecological information

A. Ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 >100 mg/l Fresh water	Fish	48 hours
4-methylpentan-2-one	Acute LC50 >179 mg/l		96 hours
butan-1-ol	Acute LC50 1376 mg/l		96 hours

B. Persistence and degradability

Product/ingredient name	Test	Result		Dose		Inoculum
4-methylpentan-2-one	OECD 301F	83 % - Rea	adily - 28 days	-		-
Product/ingredient name	Aquatic half-life	<u>.</u>	Photolysis	-	Biodeg	radability
4-methylpentan-2-one	-		-		Readily	

C. Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
4-methylpentan-2-one	1.9	-	Low
butan-1-ol	1		Low

D. Mobility in soil

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

E. <u>Other adverse effects</u> : No known significant effects or critical hazards.

Section 13. Disposal considerations

Α.	Disposal methods	: The generation of waste should be avoided or minimised 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.
В.	Disposal precautions	: 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the

thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

container. Do not cut, weld or grind used containers unless they have been cleaned

Section 14. Transport information

	UN	IMDG	ΙΑΤΑ
A. UN number	UN1263	UN1263	UN1263
B. UN proper shipping name	PAINT	PAINT	PAINT
C. Transport hazard class(es)	3	3	3 II No.
D. Packing group	II	II	
Environmental hazards	No.	No.	
E. Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

UN	: None identified.
IMDG	: None identified.
ΙΑΤΑ	: None identified.

F. Special precaution which a user to be aware of or needs to comply with in connection with transport or transportation

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

Α.	Regulation according to	ISHA	
	ISHA article 117 (Harmful substances prohibited from manufacture)	: None of the components are listed.	
	ISHA article 118 (Harmful substances requiring permission)	: None of the components are listed.	
	Article 2 of Youth Protection Act on Substances Hazardous to Youth	: It is not allowed to sell to persons under the age of 19.	
	Exposure Limits of Chemical Substances and Physical Factors		
	titanium dioxide 4-methylpentan-2-one butan-1-ol	methylpentan-2-one	

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Section 15. Regulatory information

	Annex 19 (Exposure standards established for harmful factors)	:	None of the components are listed.
	ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement)	-	The following components are listed: titanium dioxide, methyl isobutyl ketone, n- butanol
	ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check- up)	-	The following components are listed: Methyl isobutyl ketone, n-Butanol
	Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control)	:	The following components are listed: titanium dioxide, methyl isobutyl ketone, n- butanol
В.	Regulation according to C	Ch	emicals Control Act
	CCA Article 11 (TRI)	:	None of the components are listed.
	Article 18 Prohibited (K- Reach Article 27)	1	None of the components are listed.
	Article 19 Subject to authorization (K-Reach Article 25)	:	None of the components are listed.
	Article 20 Restricted (K- Reach Article 27)	:	None of the components are listed.
	Article 20 Toxic Chemicals (K-Reach Article 20)	:	Not applicable
	Korea inventory	÷	All components are listed or exempted.
	CCA Article 39 (Accident Precaution Chemicals)	:	None of the components are listed.
C.	Dangerous Materials Safety Management Act	•	Class: Class 4 - Flammable Liquid Item: 2. Class 1 petroleums - Water-insoluble liquid Threshold: 200 L Danger category: II Signal word: Contact with sources of ignition prohibited
D.	Wastes regulation	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Е.	Regulation according to c		
	Safety, health and environmental regulations specific for the product	:	No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

Α.	References	 Korean Ministry of Environment; Chemical Control Act Korean Ministry of Labor; Industrial Safety and Health Act NIER Notice Registry of Toxic Effects of Chemical Substances (RTECS) U.S. Environmental Protection Agency, AQUIRE (Aquatic toxicity Information Retrieval) ECOTOX Database System.
В.	Date of issue/Date of revision	: 1/12/2024
С.	Version	: 3.02
	Prepared by	: EHS

D. Other

Indicates information that has changed from previously issued version.

Disclaimer

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.