



Published Date  
Nov-02-2021

Revision Date  
Nov-17-2021

# SAFETY DATA SHEET

Revision Number  
1.1

## 1. IDENTIFICATION

### Product identifier

Product code **SAPPHIRE-W-5**  
Product name **White**  
Product category **Sapphire Series**

### Other means of identification

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended use Industrial Printing Operations

### Details of the supplier of the safety data sheet

M&R Printing Equipment, Inc.  
440 Medinah Rd.  
Roselle, IL 60172-2329  
(800) 736-6431

### Emergency telephone number(s)

For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident, call Chemtrec -  
Within US and Canada: (800) 424-9300 / Outside US and Canada: +1 (703) 741-5970

## 2. HAZARDS IDENTIFICATION

### Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### Label elements

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### Signal Word

None

### Hazards not otherwise classified (HNOC)

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Mixture

Component	CAS-No	Weight %	Trade Secret	Note
Deionized water	7732-18-5	30 - 60	*	
Glycerin	56-81-5	30 - 60	*	
Resin	Trade Secret	10 - 30	*	
Titanium dioxide	13463-67-7	5 - 10	*	
Ethylene glycol	107-21-1	1 - 5	*	
Surfactant	Trade Secret	1 - 5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

#### 4. FIRST-AID MEASURES

##### Description of first aid measures

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.
<b>Inhalation</b>	Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

##### Most important symptoms and effects, both acute and delayed

None under normal use conditions.

##### Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

##### Suitable Extinguishing Media

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### Unsuitable Extinguishing Media

No information available.

##### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

##### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

##### Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

##### Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

#### 7. HANDLING AND STORAGE

**Precautions for safe handling****Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children. Do not freeze.

**Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure limits**

Component	ACGIH TLV
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>
Ethylene glycol 107-21-1	TWA: 25 ppm vapor fraction STEL: 50 ppm vapor fraction STEL: 10 mg/m <sup>3</sup> inhalable particulate matter, aerosol only

Component	OSHA PEL
Glycerin 56-81-5	TWA: 15 mg/m <sup>3</sup> mist, total particulate TWA: 5 mg/m <sup>3</sup> mist, respirable fraction
Titanium dioxide 13463-67-7	TWA: 15 mg/m <sup>3</sup> total dust

Component	OSHA PEL (vacated)
Glycerin 56-81-5	TWA: 10 mg/m <sup>3</sup> mist, total particulate TWA: 5 mg/m <sup>3</sup> mist, respirable fraction
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup> total dust
Ethylene glycol 107-21-1	Ceiling: 50 ppm Ceiling: 125 mg/m <sup>3</sup>

Component	Ontario TWAEV
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>
Ethylene glycol 107-21-1	TWA: 25 ppm vapor fraction STEL: 50 ppm vapor fraction STEL: 10 mg/m <sup>3</sup> inhalable particulate matter, aerosol only

Component	Mexico OEL (TWA)
Glycerin 56-81-5	TWAVLE-PPT: 10 mg/m <sup>3</sup> mist
Titanium dioxide 13463-67-7	TWAVLE-PPT: 10 mg/m <sup>3</sup>
Ethylene glycol 107-21-1	Ceiling: 100 mg/m <sup>3</sup> aerosol

**Appropriate engineering controls****Engineering Measures**

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Wear safety glasses with side shields (or goggles). If splashes are likely to occur. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Hand Protection</b>	Chemical resistant protective gloves. Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding >480 minutes of permeation time): eg. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers. Taking into account the varying conditions, the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Due to different glove types, the manufacturer's directions for use should be observed. Replace gloves immediately when torn or any change in appearance is noticed such as dimension, color, flexibility.
<b>Respiratory Protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Color</b>	Colored
<b>Odor</b>	No information available	<b>Odor Threshold</b>	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 100 °C / 212 °F		
Flash Point	> 94 °C / > 201 °F	Pensky Martens Closed Cup (PMCC)	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1.16		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
<b>Explosive Properties</b>	No data available		

**Oxidizing Properties** No data available

**Other Information**

**Photochemically Reactive** No  
**Weight Per Gallon (lbs/gal)** 9.68

<b>VOC by weight % (less water)</b> 5.06	<b>VOC by volume % (less water)</b> No information available	<b>VOC lbs/gal (less water)</b> 0-1	<b>VOC grams/liter (less water)</b> 58.65
<b>Volatile by weight % (including Water)</b> 44.14	<b>Water by weight %</b> 41.52		

## 10. STABILITY AND REACTIVITY

**Reactivity**

No information available.

**Chemical stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Keep away from open flames, hot surfaces and sources of ignition. Do not freeze.

**Incompatible materials**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye Contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin Contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

Component	Oral LD50
Deionized water 7732-18-5	> 90 mL/kg ( Rat )
Glycerin 56-81-5	= 12600 mg/kg ( Rat )
Titanium dioxide 13463-67-7	> 10000 mg/kg ( Rat )
Ethylene glycol 107-21-1	= 4700 mg/kg ( Rat )

Component	Dermal LD50
Glycerin 56-81-5	> 10 g/kg ( Rabbit )
Ethylene glycol 107-21-1	= 10600 mg/kg ( Rat )

Component	Inhalation LC50
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Glycerin 56-81-5	> 2.75 mg/L ( Rat ) 4 h
Titanium dioxide 13463-67-7	= 5.09 mg/L ( Rat ) 4 h
Ethylene glycol 107-21-1	> 2.5 mg/L ( Rat ) 6 h

**Information on toxicological effects**

**Symptoms** Specific test data for the substance or mixture is not available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Specific test data for the substance or mixture is not available.  
**Eye damage/irritation** Specific test data for the substance or mixture is not available.  
**Irritation** Specific test data for the substance or mixture is not available.  
**Corrosivity** Specific test data for the substance or mixture is not available.  
**Sensitization** Specific test data for the substance or mixture is not available.  
**Mutagenic Effects** Specific test data for the substance or mixture is not available.  
**Carcinogenic effects** Specific test data for the substance or mixture is not available.  
**Reproductive Effects** Specific test data for the substance or mixture is not available.  
**STOT - single exposure** Specific test data for the substance or mixture is not available.  
**STOT - repeated exposure** Specific test data for the substance or mixture is not available.  
**Chronic Toxicity** Specific test data for the substance or mixture is not available.  
**Aspiration hazard** Specific test data for the substance or mixture is not available.  
**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	IARC
Titanium dioxide 13463-67-7	Group 2B

Component	OSHA
Titanium dioxide 13463-67-7	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 20,100.00

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available.

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
Ethylene glycol 107-21-1	96h EC50 Pseudokirchneriella subcapitata: 6500 - 13000 mg/L

Component	Fish
Glycerin 56-81-5	96h LC50 Oncorhynchus mykiss: 51 - 57 mL/L (static)
Ethylene glycol	96h LC50 Oncorhynchus mykiss: = 41000 mg/L

107-21-1	96h LC50 Oncorhynchus mykiss: 14 - 18 mL/L (static) 96h LC50 Lepomis macrochirus: = 27540 mg/L (static) 96h LC50 Oncorhynchus mykiss: = 40761 mg/L (static) 96h LC50 Pimephales promelas: 40000 - 60000 mg/L (static) 96h LC50 Poecilia reticulata: = 16000 mg/L (static)
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Component	Crustacea
Ethylene glycol 107-21-1	48h EC50 Daphnia magna: = 46300 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

No information available

Component	Partition coefficient
Glycerin 56-81-5	-1.76
Ethylene glycol 107-21-1	-1.93

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

Not regulated

**ICAO / IATA / IMDG / IMO**

Not Regulated

**15. REGULATORY INFORMATION****International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact:.. Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold
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			Values
Ethylene glycol	107-21-1	1 - 5	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act..

Component	CAS-No	Weight %
Ethylene glycol	107-21-1	1 - 5

**U.S. State Regulations**

Component	Massachusetts Right To Know
Glycerin 56-81-5	X
Titanium dioxide 13463-67-7	X
Ethylene glycol 107-21-1	X

Component	Minnesota Right To Know
Glycerin 56-81-5	X
Titanium dioxide 13463-67-7	X
Ethylene glycol 107-21-1	X

Component	New Jersey Right To Know
Glycerin 56-81-5	X
Titanium dioxide 13463-67-7	X
Ethylene glycol 107-21-1	X

Component	Pennsylvania Right To Know
Deionized water 7732-18-5	X
Glycerin 56-81-5	X
Titanium dioxide 13463-67-7	X
Ethylene glycol 107-21-1	X

**California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Titanium dioxide	Carcinogen
Ethylene glycol	Developmental

*This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product*

**Canada**

Component	NPRI - National Pollutant Release Inventory
Ethylene glycol 107-21-1	Part 1, Group A Substance Part 4 Substance (as set out in Section 65 of the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999)



**16. OTHER INFORMATION**

<b>HMIS:</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Personal Protection</b>
	1	1	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen  
Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Revision Date** Nov-02-2021

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**