

Safety Data Sheet

DryWired® Perma-Clean Solar 2.0: Base

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: DryWired® Perma-Clean Solar 2.0: Base
Recommended Use: Self-Cleaning, Hydrophilic, & Anti-Static Electric Coating – Base Formula for Perma-Clean Solar 2.0
Supplier: DryWired
Address: 9606 S. Santa Monica Blvd, PH
 Beverly Hills, CA 90210
Phone: 1-800-581-4528
Revised On: 08/28/18 Version 1.0
Emergency Phone: US: 1-800-535-5053, International: 1-352-323-3500

SECTION 2: HAZARDS IDENTIFICATION

Hazard classification: Classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Health	Environmental	Physical
Specific Target Organ Toxicity, Single Exposure Category 1	Acute toxicity, Oral Acute toxicity, Inhalation Acute Toxicity, Dermal Category 3 Category 3 Category 3	Flammable liquids Category 2

GHS Label elements:

Signal word: Danger



Hazard Statements	Precautionary Statements
H225 Highly flammable liquid and vapour. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H370 Causes damage to organs.	P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ eye protection/ face protection. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth. P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P311 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician. P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified: None.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures

INGREDIENT	CAS NUMBER	WEIGHT %
Methanol	67-56-1	85.0
Water	7732-18-5	8.0
Tin Oxide	18282-10-5	0.2
Silicon Dioxide	7631-86-9	3.0

SECTION 4: FIRST AID MEASURES**Description of first aid measures:**

Inhalation: Supply fresh air; If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Eye Contact: Flush eyes with water as a precaution.

If Swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment required:

No further relevant information available.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations.

Reference to other sections: For personal protection see section 8. For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Do not store in direct sunlight. Do not allow to freeze. Containers, which are opened, must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids.

Specific End Uses: No further relevant information available other than the use mentioned in Section 1.



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: Components with workplace control parameters:

Component	CAS No.	Value	Control Parameters	Basis	
Methanol	67-56-1	TWA	200 ppm	USA. ACHIS TLV	
		Remarks: Headache, Nausea, Dizziness, Eye Damage, Substances for which there is a Biological Exposure Index or Indices (see BEI section), Danger of cutaneous absorption			
		STEL	250 ppm	USA. NIOSH Recommended Exposure Limits	
		Remarks: Headache, Nausea, Dizziness, Eye Damage, Substances for which there is a Biological Exposure Index or Indices (see BEI section), Danger of cutaneous absorption			
		TWA	200 ppm/260 mg/m ³	USA. NIOSH Recommended Exposure Limits	
		Remarks: Potential for dermal absorption			
		ST	250ppm/325mg/m ³	USA. NIOSH Recommended Exposure Limits	
		Remarks: Potential for dermal absorption			
		TWA	200 ppm/260 mg/m ³	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants	
Remarks: Value in mg/m ³ is approximate.					
Tin Oxide	21651-19-4	TWA	2 mg/m ³	USA. NIOSH Recommended Exposure Limits	
		TWA	2 mg/m ³	USA. ACHIS TLV	
		TWA	15 mg/m ³	USA. OSHA Permissible Exposure Limit (PEL) 29 (CFR 1915.1000 Table Z-Shipyards).	
Silicon Dioxide	7631-86-9	TWA	80 mg/m ³ , 20 mppcf	USA. OSHA Permissible Exposure Limit (PEL) 29 (CFR 1910.1000 Z-3 Table).	
		TWA	20 mppcf	USA. OSHA Permissible Exposure Limit (PEL) 29 (29 CFR 1926.55 Appendix A).	
		TWA	20 mppcf	USA. OSHA Permissible Exposure Limit (PEL) 29 (29 CFR 1915.1000 Table Z-Shipyards - Mineral Dusts).	
		TWA	6 mg/m ³	USA. NIOSH Recommended Exposure Limits	
Component	CAS No.	Value	Biological Specimen	Basis	
Methanol	67-56-1	15 mg/l	Urine	ACGIH–Biological Exposure Indices(BEI)	
Remarks: End of shift (As soon as possible after exposure ceases).					

Derived No Effect Level (DNEL): Methanol:

Application Area	Exposure Routes	Health Effect	Value
Workers	Skin Contact	Long-term systemic effects	40 mg/kg BW/d
Consumers	Skin Contact	Long-term systemic effects	8 mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects	8 mg/kg BW/d
Workers	Skin Contact	Acute systemic effects	40 mg/kg BW/d
Consumers	Ingestion	Acute systemic effects	8 mg/kg BW/d
Consumers	Inhalation	Acute systemic effects	8 mg/kg BW/d
Workers	Inhalation	Acute systemic effects	260 mg/kg BW/d
Workers	Inhalation	Acute local effects	260 mg/kg BW/d
Workers	Inhalation	Long-term systemic effects	260 mg/kg BW/d
Workers	Inhalation	Long-term local effects	260 mg/kg BW/d
Consumers	Inhalation	Acute systemic effects	50 mg/kg BW/d
Consumers	Inhalation	Acute local effects	50 mg/kg BW/d
Consumers	Inhalation	Long-term systemic effects	50 mg/kg BW/d
Consumers	Inhalation	Long-term local effects	50 mg/kg BW/d

Compartment	Value
Soil	25.5 mg/kg
Marine Water	15.4 mg/l
Fresh Water	154 mg/l
Fresh Water Sediment	570.4 mg/kg
Onsite sewage treatment plant	100 mg/kg

Appropriate engineering controls: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment:

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact: Material: butyl-rubber, Minimum layer thickness: 0.3 mm, Break through time: 480 min

Splash contact: Material: Nitrile rubber, Minimum layer thickness: 0.4 mm, Break through time: 31 min

Body Protection: Complete suit to protect against chemicals, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Semitransparent liquid	Odour:	Alcohol
Odour Threshold:	No data available.	pH:	No data available.
Melting Point/Freezing Point:	No data available.	Boiling Point/Range:	64.7°C (148.5°F)
Flash Point:	12.0 °C (53.6 °F)	Evaporation Rate:	No data available.
Flammability (solid, gas):	Vapours can mix with air to form explosive mixtures.	Upper/Lower Flammability of Explosive Limits:	If stored in sealed tank or bottle, will give rise to combustible mixture in the temperature range of 11°C ~ 42°C
Vapour Pressure:	No data available.	Vapour Density:	12.3kPa (20°C)
Relative Density:	0.80-0.82 g/ml	Solubility:	No data available.
Partition Coefficient: n-octanol and water:	No data available.	Auto-Ignition Temperature:	464.0 °C (867.2 °F)
Decomposition Temperature:	No data available.	Viscosity:	No data available.

Other Information: No further relevant information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Vapours may form explosive mixture with air.

Conditions to avoid: Heat, flames, and sparks.

Incompatible materials: Acid chlorides, Acid anhydrides, Alkali metals, Reducing agents, Acids. Reacts strongly with oxidizing agents.

Hazardous decomposition products: No data available. In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

Likely routes of exposure: Inhalation

Acute Toxicity: Methanol:

LDLO Oral - Human - 143 mg/kg; Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

LD50 Oral - Rat - 1,187 - 2,769 mg/kg, LC50 Inhalation - Rat - 4 h - 128.2 mg/l, LC50 Inhalation - Rat - 6 h - 87.6 mg/l, LD50

Dermal - Rabbit - 17,100 mg/kg

Skin corrosion/irritation: Skin – Rabbit, Result: No skin irritation

Serious eye damage/eye irritation: Eyes – Rabbit, Result: No eye irritation



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Respiratory or skin sensitisation: Maximisation Test (GPMT) - Guinea pig, Does not cause skin sensitisation. (OECD Test Guideline 406)

Germ cell mutagenicity: Ames test, S. typhimurium, Result: negative in vitro assay, fibroblast, Result: negative, Mutation in mammalian somatic cells. Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis), Mouse - male and female, Result: negative

Carcinogenicity: Methanol:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Damage to fetus not classifiable. Fertility classification not possible from current data.

Specific target organ toxicity - single exposure: Causes damage to organs.

Specific target organ toxicity - repeated exposure: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard: No aspiration toxicity classification

Additional Information: RTECS: PC1400000

Methyl alcohol may be fatal or cause blindness if swallowed.

Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures.

Symptoms may be delayed., Damage of the:, Liver, Kidney

Stomach - Irregularities - Based on Human Evidence

SECTION 12: ECOLOGICAL INFORMATION

Aquatic toxicity: Methanol:

Toxicity to fish: mortality LC50 Lepomis macrochirus (Bluegill)-15,400.0 mg/l - 96 h, NOEC - Oryzias latipes - 7,900 mg/l-200 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - > 10,000.00 mg/l - 48 h

Toxicity to algae: Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000.0 mg/l - 96 h

Persistence and degradability: Methanol:

Biodegradability: aerobic - Exposure time 5 d, Result: 72 % - rapidly biodegradable

Biochemical Oxygen Demand (BOD): 600 - 1,120 mg/g

Chemical Oxygen Demand (COD): 1,420 mg/g

Theoretical oxygen demand: 1,500 mg/g

Bioaccumulative potential: Methanol: Cyprinus carpio (Carp) - 72 d at 20 °C - 5 mg/l, Bioconcentration factor (BCF): 1.0

Mobility in soil: Methanol: Will not adsorb on soil.

Other adverse effects: Methanol: Additional ecological information: Avoid release to the environment. Stability in water at 19 °C83 - 91 % - 72 h Remarks: Hydrolyses on contact with water. Hydrolyses readily.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Methods: Should be taken to an authorized industrial waste handler. Do not allow to reach water supply.

Uncleaned Packaging: Recommendation: Dispose of as unused product according to official regulations.

SECTION 14: TRANSPORT INFORMATION

DOT (US): UN number: 1230 Class: 3 Packing group: II Proper shipping name: Perma-Clean	IMDG: UN number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D	IATA: UN number: 1230 Class: 3 (6.1) Packing group: II Proper shipping name: Perma-Clean
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Solar: Base (contains methanol) Reportable Quantity (RQ): 5000 lbs Poison Inhalation Hazard: No	Proper shipping name: Perma-Clean Solar: Base (contains methanol)	Solar: Base (contains methanol)
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These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. DryWired® transportation classifications are based on product formulation, packaging, DryWired® policies and DryWired® understanding of applicable current regulations. DryWired® does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original DryWired® package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

International Regulations: Contact DryWired® for more information.

US Federal Regulations: Contact DryWired® for more information.

SARA Section 311/312 Hazards: Methanol: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SARA Section 313: Methanol, CAS No. 67-56-1, Revision Date 2007-07-01

State Regulations: Contact DryWired® for more information.

Massachusetts Right To Know Components: Methanol, CAS-No. 67-56-1, Revision Date 2007-07-01

New Jersey Right To Know Components: Methanol, CAS-No. 67-56-1, Revision Date 2007-07-01

Pennsylvania Right To Know Components: Methanol, CAS-No. 67-56-1, Revision Date 2007-07-01

California Proposition 65 Components: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Methanol, CAS-No. 67-56-1, Revision Date 2012-03-16

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372: Methanol.

Chemical Inventories:

The components of this product are in compliance with the chemical notification requirements of TSCA. Contact DryWired® for more information.

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued.

DRYWIREDD®MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE.

User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application.

Given the variety of factors that can affect the use and application of a DryWired® product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the DryWired® product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.