

Safety Data Sheet

DryWired® Liquid NanoTint Clear

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: DryWired® Liquid NanoTint Clear
Recommended Use: Thermal insulation coating with a high visible light transmission
Supplier: DryWired®
Address: 9606 Santa Monica Blvd, PH
 Beverly Hills, CA 90210
Phone: 1-800-581-4528
Revised On: 09/01/16
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 - Central Nervous System	Category 3	Acute toxicity, Aquatic	Category 3	Flammable liquids	Category 3
Skin Sensitisation	Category 1	Chronic toxicity, Aquatic	Category 4		
Acute Toxicity, Inhalation	Category 4				
Acute Toxicity, Dermal	Category 4				

GHS Label elements: Signal word: Warning



<u>Hazard Statements</u>	<u>Precautionary Statements</u>
H226 Flammable liquid and vapour. H312 + H332 Harmful in contact with skin or if inhaled. H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness. H402 Harmful to aquatic life. H413 May cause long lasting harmful effects to aquatic life.	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. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. P321 Specific treatment (see supplemental first aid instructions on this label). P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified: Repeated exposure may cause skin dryness or cracking.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures

INGREDIENT	CAS NUMBER	WEIGHT %



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Indium Oxide	1312-43-2	1.0
Cesium Tungstate	13587-19-4	4.0
2-(2-Hydroxy-5-methylphenyl)benzotriazole	2440-22-4	7.0
2-Butoxyethyl acetate	112-07-2	10.0 – 20.0
Propylene glycol monomethyl ether acetate	108-65-6	19.0
Acrylic Resin	-	23.0 – 35.0
Butyl Acetate	123-86-4	23.0 – 35.0

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. Consult a physician.

Eye Contact: Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.

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, nitrogen 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. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing without creating dust and place in suitable, closed 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 formation of dust and aerosols. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation at places where dust is formed. 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: Components with workplace control parameters:

Component	CAS No.	Value	Control Parameters	Basis
Propylene glycol monomethyl ether acetate	108-65-6	TWA	50.0 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
n-Butyl acetate	123-86-4	TWA	150 ppm	USA. ACHIS TLV

		Remarks: Upper Respiratory Tract irritation, Eye irritation	
		STEL	200 ppm USA. ACHIS TLV
		Remarks: Upper Respiratory Tract irritation, Eye irritation	
		TWA	150 ppm, 710 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	150 ppm, 710 mg/m ³ USA. NIOSH Recommended Exposure Limits
		ST	200 ppm, 950 mg/m ³ USA. NIOSH Recommended Exposure Limits
Butylglycol acetate	112-07-2	TWA	20.0 ppm USA. ACHIS TLV
		Remarks: Hemolysis, Confirmed animal carcinogen with unknown relevance to humans	
		TWA	5.0 ppm, 33.0 mg/m ³ USA. NIOSH Recommended Exposure Limits

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.

Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid	Odour:	Dark blue, strong odor
Odour Threshold:	No data available.	pH:	No data available.
Melting Point/Freezing Point:	No data available.	Initial Boiling Point/Boiling Point Range:	124°C
Flash Point:	23°C (73°F)	Evaporation Rate:	No data available.
Flammability (solid, gas):	Flammable.	Upper/Lower Flammability of Explosive Limits:	No data available.
Vapour Pressure:	No data available.	Vapour Density:	0.277kPa (20°C)
Relative Density:	0.95 +/- 0.05	Solubility:	No data available.
Partition Coefficient: n-octanol and water:	No data available.	Auto-Ignition Temperature:	325°C
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: Acids, bases, strong oxidizing agents, strong reducing agents.

Hazardous decomposition products: Cesium oxides, tungsten oxides. In the event of a fire, see section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation.

Acute Toxicity: Propylene glycol monomethyl ether acetate: LDLO Oral - Rat- female - 8.532 mg/kg; LD50 Dermal - Rat - male and female - > 2000 mg/kg (OECD Test Guideline 404). n-Butyl acetate: LD50 Oral - Rat - female - 10,760 mg/kg (OECD Test

Guideline 423); LC50 Inhalation - Rat - male and female - 4 h - > 21 mg/l (OECD Test Guideline 403); LD50 Dermal - Rabbit - male and female - > 14,112 mg/kg (OECD Test Guideline 402). 2-(2-Hydroxy-5-methylphenyl)benzotriazole: LD50 Oral - rat - male and female - 10,000 mg/kg; LC50 Inhalation - rat - male and female - 4 h - > 590 mg/m³ (OECD Test Guideline 403); Dermal: no data available.

Butylglycol acetate: LD50 Oral - Rat - 2,400 mg/kg, Remarks: Kidney, Ureter, Bladder:Hematuria. Kidney, Ureter, Bladder:Other changes in urine composition; Inhalation: No data available; LD50 Dermal - Rabbit - 1,500 mg/kg, Remarks: Kidney, Ureter, Bladder:Hematuria. Kidney, Ureter, Bladder:Other changes in urine composition. Blood: Normocytic anemia.

Skin corrosion/irritation: Propylene glycol monomethyl ether acetate: Skin – Rabbit, Result: No skin irritation (OECD Test Guideline 404). n-Butyl acetate: Skin - Rabbit, Result: No skin irritation - 4 h (OECD Test Guideline 404). 2-(2-Hydroxy-5-methylphenyl)benzotriazole: Skin - rat, result: No skin irritation - 24 h.

Serious eye damage/eye irritation: Propylene glycol monomethyl ether acetate: Eyes – Rabbit, Result: No eye irritation n-Butyl acetate: Eyes - Rabbit, Result: No eye irritation (OECD Test Guideline 405). 2-(2-Hydroxy-5-methylphenyl)benzotriazole: Eyes - rabbit, Result: No eye irritation (OECD Test Guideline 405). Butylglycol acetate: Eyes - Rabbit, Result: Mild eye irritation - 24 h.

Respiratory or skin sensitisation: Propylene glycol monomethyl ether acetate: Maximisation Test (GPMT) - Guinea pig, Does not cause skin sensitisation. (OECD Test Guideline 406) 2-(2-Hydroxy-5-methylphenyl)benzotriazole: - guinea pig, Result: May cause sensitisation by skin contact (OECD Test Guideline 406).

Germ cell mutagenicity:

Propylene glycol monomethyl ether acetate: Reverse mutation assay, *S. typhimurium*, Result: negative.

n-Butyl acetate: Ames test, *S. typhimurium*, Result: negative.

2-(2-Hydroxy-5-methylphenyl)benzotriazole: Ames test, *S. typhimurium*, Result: negative, Mutagenicity (micronucleus test), Hamster - male and female, Result: negative.

Carcinogenicity:

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.

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: n-Butyl acetate: Developmental Toxicity - Rat - Inhalation. No adverse effect has been observed in chronic toxicity tests.

Specific target organ toxicity - single exposure: n-Butyl acetate: May cause drowsiness or dizziness. - Central nervous system.

Specific target organ toxicity - repeated exposure: No data available.

Aspiration hazard: No data available.

Additional Information: Propylene glycol monomethyl ether acetate: Repeated dose toxicity - Rat - male and female - Oral, RTECS: AI8925000. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence. n-Butyl acetate: Repeated dose toxicity, Rat - male and female - inhalation (vapour) - NOAEL : 2.4 mg/l RTECS: AF7350000. Drowsiness, to the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence. 2-(2-Hydroxy-5-methylphenyl)benzotriazole: RTECS: GO6860000- To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Butylglycol acetate: RTECS: KJ8925000 Stomach - Irregularities - Based on Human Evidence.

SECTION 12: ECOLOGICAL INFORMATION**Toxicity:**

Toxicity to fish: Propylene glycol monomethyl ether acetate: mortality LC50 - *Salmo gairdneri* - 100 - 180 mg/l - 96 h. (OECD Test Guideline 203) n-Butyl acetate: flow-through test LC50 - *Pimephales promelas* (fathead minnow) - 18 mg/l - 96h (OECD Test Guideline 203)

2-(2-Hydroxy-5-methylphenyl)benzotriazole: Toxicity to fish semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - > 0.17 mg/l - 96 h (OECD Test Guideline 203).

Toxicity to daphnia and other aquatic invertebrates:

Propylene glycol monomethyl ether acetate: static test EC50 - *Daphnia magna* (Water flea) - > 500 mg/l - 48 h

n-Butyl acetate: static test EC50 - *Daphnia* (water flea) - 44 mg/l - 48 h

2-(2-Hydroxy-5-methylphenyl)benzotriazole: Immobilization EC50 - *Daphnia magna* (Water flea) - > 1,000 mg/l - 24 h (OECD Test Guideline 202).

Toxicity to algae:

n-Butyl acetate: static test EC50 - *Desmodesmus subspicatus* (*Scenedesmus subspicatus*) - 674.7 mg/l - 72 h.



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2-(2-Hydroxy-5-methylphenyl)benzotriazole: Respiration inhibition EC50 - Sludge Treatment - > 100 mg/l - 3 h.

Persistence and degradability:

Biodegradability:

Propylene glycol monomethyl ether acetate: Biotic/Aerobic - Exposure time 28 d Result: 83 % - Readily biodegradable. (OECD Test Guideline 301F)

n-Butyl acetate: aerobic - Exposure time 28 d Result: 83 % - Readily biodegradable (OECD Test Guideline 301D)

Biochemical Oxygen Demand (BOD):

2-Methoxy-1-methylethyl acetate: 0.36 mg/l

Chemical Oxygen Demand (COD):

2-Methoxy-1-methylethyl acetate: 1.74 mg/g

2-(2-Hydroxy-5-methylphenyl)benzotriazole: aerobic - Exposure time 28 d, Result: 0 % - Not biodegradable (OECD Test Guideline 301B).

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects:

n-Butyl acetate: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

2-(2-Hydroxy-5-methylphenyl)benzotriazole: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Methods: Offer surplus and non-recyclable solutions to a licensed disposal company. Should be taken to an authorized industrial waste handler. Do not allow to reach water supply.

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

SECTION 14: TRANSPORT INFORMATION

<u>DOT (US):</u>	<u>IMDG:</u>	<u>IATA:</u>
UN number: 1263	UN number: 1263	UN number: 1263
Class: 3	Class: 3	Class: 3
Packing Group: III	Packing Group: III	Packing Group: III
Proper shipping name: Liquid NanoTint (Contains Flammable Liquids)	Proper shipping name: Liquid NanoTint (Contains Flammable Liquids)	Proper shipping name: Liquid NanoTint (Contains Flammable Liquids)

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 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

SARA Section 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

Butylglycol acetate, CAS-No. 112-07-2, Revision Date 2010-08-02.

State Regulations: Contact DryWired® for more information.

Massachusetts Right To Know Components: n-Butyl acetate, CAS-No. 123-86-4, Revision Date 1993-04-24

New Jersey Right To Know Components: 2-Methoxy-1-methylethyl acetate, CAS-No. 108-65-6; n-Butyl acetate, CAS-No. 123-86-4, Revision Date 1993-04-24; 2-(2-Hydroxy-5-methylphenyl)benzotriazole, CAS-No. 2440-22-4, Butylglycol acetate, CAS-No. 112-07-2, Revision Date 2010-08-02.

Pennsylvania Right To Know Components: 2-Methoxy-1-methylethyl acetate, CAS-No. 108-65-6; n-Butyl acetate, CAS-No. 123-86-4, Revision Date 1993-04-24; 2-(2-Hydroxy-5-methylphenyl)benzotriazole, CAS-No. 2440-22-4, Butylglycol acetate, CAS-No. 112-07-2, Revision Date 2010-08-02.

California Proposition 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Chemical Inventories:



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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.

DRYWIRED® 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.