

## SAFETY DATA SHEET

SDS Review Date: 08/04/15

SDS Version Number: 1

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

#### 1.1. Product identifier

Product Form: *Yellow Liquid*  
Product Name: *Synthetic Field Marking*  
Product Code: *2251*

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

*Use for field marking.*

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

*Franklin Paint Company, Inc.*  
*259 Cottage St.*  
*Franklin, MA 02038*  
[www.franklinpaint.com](http://www.franklinpaint.com)

#### 1.4. Emergency telephone number

*Emergency Information number : CHEMTEL 800-255-3924*  
*Product Information number : OFFICE 800-486-0304*

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Classification	Hazard Category	Hazard Number
<i>Serious eye damage/eye irritation</i>	<i>2B</i>	<i>H320</i>
<i>Specific Target Organ Toxicity - Single Exposure</i>	<i>3</i>	<i>H335</i>
<i>Carcinogenicity</i>	<i>2</i>	<i>H351</i>

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) – **WARNING**

Hazard statements (GHS-US)

*Causes eye irritation (H320)*

*May cause respiratory irritation (H335)*

*Suspected of causing cancer (H351)*

*Obtain special instructions before use. (P201)*

*Do not handle until all safety precautions have been read and understood. (P202)*

*Wash thoroughly after handling. (P264)*

*Wear protective gloves/protective clothing/eye protection/face protection. (P280)*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. (P305 + P351 + P338)*

*If eye irritation persists get medical advice/attention. (P337 + P313)*

*Avoid breathing dust/fumes/gas/mist/vapors/spray. (P261)*

*Use only outdoors or in a well ventilated area. (P271)*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304 + P340)*

*IF exposed or concerned get medical advice/attention. (P308 + P313)*

*Store in a well ventilated place. Keep container tightly closed. (P403 + P233)*

*Store locked up. (P405)*

*Dispose of contents/container in accordance with local/regional/national/international regulation (P501)*

**2.3. Other hazards**

*None known*

**2.4. Unknown acute toxicity (GHS-US)**

*No data available*

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substances**

*Not applicable*

**3.2. Mixture**

Component	CAS No. EC No.	Percent	Hazard class / category / statement
Titanium Dioxide	13463-67-7 236-675-5	2 - 16	Carc. 2; H351
Aqua Ammonia	7664-41-7 231-635-3	< 1	Eye Irrit.; 2B, H320 STOT SE; 3, H335

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**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures**

<b>General</b>	<i>No hazards which require special first aid measures.</i>
<b>Inhalation</b>	<i>If overexposed to mist or dust above published exposure limits, move to fresh air. If symptoms persist, call a physician.</i>
<b>Skin Contact</b>	<i>Wash off immediately with soap and plenty of water removing all contaminated clothing necessary.</i>
<b>Eye Contact</b>	<i>Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.</i>
<b>Ingestion</b>	<i>Rinse mouth with water and afterwards drink plenty of water. Do not induce vomiting. Call a physician immediately. Never give anything by mouth to an unconscious person.</i>

**4.2. Most important symptoms and effects, both acute and delayed**

*No information available.*

**4.3. Indication of any immediate medical attention and special treatment needed**

*Treat symptomatically.*

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media**

*Suitable extinguishing media: Water, dry chemical, or carbon dioxide.*

*Unsuitable extinguishing media : None*

**5.2. Special hazards arising from the substance or mixture**

*Carbon monoxide, carbon dioxide, and organic products of decomposition may be released in case of fire: Closed container may rupture if strongly heated.*

**5.3. Advice for firefighters**

*As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.*

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

*Assure sufficient ventilation. Use personal protective clothing. Use NIOSH approved respiratory protection if exposed to vapors, dust, mist, or aerosols above published exposure limits.*

**6.2. Environmental precautions**

*Product sinks in water. Prevent spilled material from entering waterways or soil, There are no chemical ingredients with an established CERCLA Reportable Quantity (RQ) for spills and releases.*

**6.3. Methods and material for containment and cleaning up**

*Absorb spill with inert material and place in a chemical waste container. Dispose of in accordance with federal, state, provincial and local laws and regulations. Remove large quantities mechanically by pumping.*

**6.4. Reference to other sections**

*See Section 8 for exposure controls and personal protection.*

**SECTION 7: HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

*Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. Wear impermeable rubber gloves. Wash thoroughly after handling. In case of insufficient ventilation, wear suitable respiratory equipment. Remove contaminated clothing and wash it before reuse. Do not eat, drink, smoke or chew tobacco around material.*

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage conditions:** *Store container at temperatures above 5 °C (40 °F) and less than 49 °C (120 °F). Keep out of the reach of children.*

**Incompatible products:** *Strong acids, strong bases, strong oxidizers.*

**Incompatible materials:** *Lithium metal, sodium metal.*

**7.3. Specific end use(s)**

*No additional information available.*

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

<b>Chemical Name</b>	<b>ACGIH &amp; Canada</b>	<b>OSHA &amp; Mexico</b>
Titanium dioxide	10 mg/m <sup>3</sup> - TWA total 3 mg/m <sup>3</sup> – TWA respirable	15 mg/m <sup>3</sup> - TWA total 5 mg/m <sup>3</sup> - TWA respirable

**8.2. Exposure controls**

*Provide general and/or local exhaust ventilation to maintain airborne levels below the exposure limits in Section 8. Refer to the current edition of 'Industrial Ventilation: A Manual of*

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*Recommended Practice' published by the American Conference of Government Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.*

### 8.3. Personal protective equipment

<b>Protective measures</b>	<i>Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling</i>
<b>Hygiene measures</b>	<i>Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.</i>
<b>Respiratory protection</b>	<i>In case of insufficient ventilation wear NIOSH approved respiratory equipment. If vapor exceeds TLV or PEL, use NIOSH approved air-purifying respirators equipped with organic vapor cartridges. Air-purifying .</i>
<b>Hand protection</b>	<i>Wear water proof protective gloves and impervious clothing.</i>
<b>Eye protection</b>	<i>Use safety glasses with side shields, (ANSI Z87.1 or approved equivalent).</i>

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	<i>Yellow Liquid</i>
<b>Odor</b>	<i>Ammonia like</i>
<b>Odor Threshold</b>	<i>5 ppm re ATSDR</i>
<b>pH</b>	<i>6.0 – 8.5</i>
<b>Melting / Freezing Point</b>	<i>32 (°F), 0 (°C)</i>
<b>Boiling Point</b>	<i>212 (°F), 100 (°C)</i>
<b>Flash Point</b>	<i>Not Applicable</i>
<b>Evaporation rate</b>	<i>1 (water = 1)</i>
<b>Flammability (solid, gas)</b>	<i>Not applicable</i>
<b>Lower Explosion Limit</b>	<i>Not applicable</i>
<b>Upper Explosion Limit</b>	<i>Not applicable</i>
<b>Vapor Pressure</b>	<i>40 mmHg</i>
<b>Vapor Density</b>	<i>Not available</i>
<b>Density Relative</b>	<i>1.05</i>
<b>Density (lbs/gal)</b>	<i>8.76</i>
<b>Solubility</b>	<i>Water miscible</i>
<b>Wt. % Solids</b>	<i>14.71</i>
<b>Vol. % Solids</b>	<i>10.78</i>

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<b>Wt. % Volatiles</b>	85.29
<b>Vol. % Volatiles</b>	89.23
<b>Grams VOCs / liter</b>	145.18
<b>Wt % HAPs</b>	0
<b>Partition coefficient (o/w)</b>	No data
<b>Ignition Temp.</b>	No data
<b>Autoignition Temp.</b>	Not applicable
<b>Decomposition Temp.</b>	No data
<b>Oxidizing properties :</b>	Not applicable
<b>Explosive properties :</b>	Not applicable

**9.2. Other information**

No additional information available.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1. Reactivity:** Hazardous polymerization will not occur.

**10.2. Chemical stability:** Stable under normal conditions.

**10.3. Possibility of hazardous reactions:** Not applicable

**10.4. Conditions to avoid:** Prevent from freezing.

**10.5. Incompatible materials:** Strong acids, strong bases, strong oxidizers.

**10.6. Hazardous decomposition products:** Carbon monoxide, carbon dioxide, and organic products of decomposition may be released in case of fire.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution** No data

**Caustic burning / irritation of skin**

Titanium Dioxide Irritating

**Serious eye damage/eye irritation**

Titanium Dioxide Irritating

**Acute Oral Toxicity**

Titanium Dioxide LD50 Rat > 10000 mg/kg

**Acute Inhalational Toxicity**

Titanium Dioxide *LC50 Rat inhalation 4 hr (Dust): > 6.82 mg/L*

**Acute Dermal Toxicity**

Titanium Dioxide *LD50 Rabbit > 15200 mg/kg*

**Respiratory/Skin Sensitization**

Titanium Dioxide *No information available*

**Mutagenicity Assessment:**

Titanium Dioxide *Not mutagenic according to test data for normal pigment particles, some adverse mutagenic data obtained with titanium dioxide nano particles.*

**Carcinogenicity**

Titanium Dioxide *IARC 2B - Possible Human Carcinogen.*

- *Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."*

**Reprotoxicity / Teratogenicity**

Titanium Dioxide *No information available*

**CMR Assessment**

*No data*

**Toxicokinetics, metabolism and distribution**

*No data*

**Caustic burning / irritation of skin**

Titanium Dioxide *Irritating*

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Titanium Dioxide *Irritating*

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**Reprotoxicity / Teratogenicity**

Titanium Dioxide *No information available*

**CMR Assessment**

*No data*

**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity**

Titanium dioxide: *LC50: >1000 mg/L (Fathead Minnow - 96 hr.)*

**12.2. Persistence and degradability**

*No information available or No known data.*

**12.3. Bioaccumulative potential**

*No information available or No known data.*

**12.4. Mobility in soil**

*No information available or No known data.*

**12.5. Other adverse effects**

*No information available or No known data.*

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

*Dispose of in accordance with local/state, and national regulations.*



**SECTION 14: TRANSPORTATION INFORMATION**

**US DOT Hazard Classification:** *Not regulated*  
**Canadian TDG Classification:** *Not regulated*  
**Air transport ICAO / IATA:** *Not regulated*  
**Shipment by sea IMDG / GGVSee:** *Not regulated*

**SECTION 15: REGULATORY INFORMATION**

**15.1. US Regulations**

**CERCLA (EPA)** See Section 6 above.

**SARA TITLE III (EPA)** *Product contains the following chemicals listed as Toxic Chemicals subject to the reporting requirements of SARA Title III §313 and 40 CFR Part 372.*

*None*

*SARA Title III §§311/312 and 40 CFR 370 Tier II & MSDS reporting is required for the uncured product as a whole above the 10,000 lb “on-site at any time” threshold as*

<i>Acute Health Hazard</i>	<i>Yes</i>
<i>Chronic Health Hazard</i>	<i>Yes</i>
<i>Fire Hazard</i>	<i>No</i>
<i>Sudden Release of Pressure Hazard</i>	<i>No</i>
<i>Reactive Hazard</i>	<i>No</i>

*Not subject to SARA Title III §302(c) and 40 CFR 355 Threshold Planning Quantity (TPQ) requirements.*

**TSCA (EPA)** *Product complies with US TSCA inventory requirements.*

**Clean Air Act (EPA):** *Product contains the following chemicals listed as a Hazardous Air Pollutant (HAP) under Section 112 :*

*None*

*Product contains the following chemicals listed as Risk Management (RMP) chemicals under Section 112r:*

*None*

**15.2. International regulations**

**Canada**

**Canadian DSL** (Domestic Substances List) Inventory – *All chemical ingredients of this product are listed or exempted.*

**EU-Regulations**

**Classification according to Regulation (EC) No. 1272/2008 [CLP] - Amending & repealing EC No 1272/2008 Directives 67/548/EEC & 1999/45/EC, and amending (EC) No 1907/2006**

None

**15.3. US State regulations**

**CALIFORNIA PROP 65** Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Titanium Dioxide

State Right to Know Lists	CA	FL	NJ	PA	MN	MA	RI
Titanium Dioxide	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**SECTION 16: OTHER INFORMATION**

	Health	Flammability	Physical Hazard
HMIS rating	1*	0	0
NFPA rating	1	0	0

HMIS Hazard Ratings	NFPA Hazard Ratings
4 = severe	4 = extreme
3 = serious	3 = high
2 = moderate	2 = moderate
1 = slight	1 = slight
0 = minimal	0 = insignificant
N = no rating for powders	N = no rating for powders
* = chronic health hazard	

**Acronyms Legend**

- ACGIH** American Conference of Governmental Industrial Hygienists
- ATSDR** Agency for Toxic Substances and Disease Registry
- c.c.** closed cup
- Carc** Carcinogen
- CAS** Chemical Abstract Services
- CERCLA** Comprehensive Environmental Response – Compensation and Liability Act
- CFR** Code of Federal Regulations
- CMR** Carcinogenic-Mutagenic-Toxic for Reproduction

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<b>DOT</b>	Department of Transportation
<b>EC50</b>	half maximal effective concentration
<b>EPA</b>	Environmental Protection Agency
<b>ERG</b>	Emergency Response Guide Book
<b>Flam. Liq.</b>	Flammable Liquid
<b>GHS</b>	Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
<b>HAP</b>	Hazardous Air Pollutant
<b>HCS</b>	Hazard Communication Standard
<b>HMS</b>	Hazardous Materials Identification System
<b>IARC</b>	International Agency for Research on Cancer
<b>IATA</b>	International Air Transport Association
<b>ICAO-TI</b>	International Civil Aviation Organization- Technical Instructions
<b>ID</b>	Identification number
<b>IMDG</b>	International Maritime Dangerous Goods
<b>LC50</b>	50 % Lethal Concentration
<b>LD50</b>	50 % Lethal Dose
<b>mmHg</b>	millimeters of Mercury
<b>MARPOL</b>	International Convention for the Prevention of Pollution from Ships
<b>NFPA</b>	National Fire Protection Association
<b>o. c.</b>	open cup
<b>OEL</b>	Occupational Exposure Limit
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PBT</b>	Persistent, Bioaccumulative, Toxic
<b>RQ</b>	Reportable Quantity
<b>SARA</b>	Superfund Amendments Reauthorization Act
<b>SDS</b>	Safety Data Sheet
<b>STOT</b>	Specific Target Organ Toxicity
<b>TPQ</b>	Threshold Planning Quantity
<b>UN</b>	United Nations
<b>VOC</b>	Volatile Organic Compounds
<b>WHMIS</b>	Workplace Hazardous Materials Information System

**SDS Status:** *The information contained herein relates only to the specific material identified. Franklin Paint Company believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Franklin Paint Company urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.*