Franklin Paint™

259 COTTAGE ST FRANKLIN, MA 02038
www.franklinpaint.com

Product Data: HYDROPHAST™ WATERBORNE TRAFFIC PAINT

DESCRIPTION: Lead free, VOC compliant, fast drying, 100% acrylic waterborne traffic paint. Conforms to the performance specifications referenced in Federal Specification TT-P-1952E Type I & II, Federal Specification TT-P-1952F Type I & II, as well as many state & federal specifications. Recommended for use on bituminous or concrete pavements, and various sealcoat applications. Not recommended for use on concrete sealers containing silicone.

SURFACE CONDITION/PREPARATION: Asphalt and concrete surfaces should be cured, clean, dry, and sound. Loose and lifting paint should be removed prior to application. Concrete with sealers containing silicone, having a smooth finish, or efflorescence should be removed by etching or abrasive blasting, as these conditions may interfere with adhesion. When the product must be applied on new asphalt, apply two thin coats 7-8 mils each, allowing 24 hours between coats is recommended to help minimize cracking and lifting. While new asphalt surfaces vary in length of time required for cure, one to two weeks is usually adequate for the application of waterborne paints. Waterborne paints applied too thick or too soon may cause asphalt to lift and or crack. *Regardless of surface condition, a test stripe should be placed inconspicuously to determine if surface is suitable before continuing.*

APPLICATION: Formulated for use with either airless or conventional air atomized spray equipment. See equipment manufacturer's recommendations. Recommended paint thickness is 15 mils wet. For best results apply when air and surface temperatures are above 50°F and relative humidity is below 85%. To improve spraying, paint may be heated to an optimum temperature of 110°F, never exceed 160°F. Heating waterborne paint will not accelerate dry time.

THINNING & CLEANING: Thinning is not recommended. Wet paint may be cleaned with water. Dried paint is very difficult to remove.

SHELF LIFE: 12 months minimum in an unopened container stored @ 77ºF out of direct sunlight indoors. It is recommended to order only what you are able to use in this time frame.

STORAGE: Store in a cool dry area, indoors, and out of direct sunlight. **KEEP FROM FREEZING!**

Never mix waterborne and alkyd traffic paints!

Typical values:

	2014 WHITE	2015 YELLOW	2022 GREEN	2023 BLACK	2024 BLUE	2025 RED
Coverage/Gal (15 mils wet 4" line)	320'	320'	320'	320'	320'	320'
Dry Time Minutes 15 mils (ASTM D-711)	8	8	10	10	10	10
Dry Opacity (Hiding)	0.975	0.96	N/A	N/A	N/A	N/A
Viscosity-KU (Kreb Units)	80-90	80-90	80-90	80-90	80-90	80-90
Weight/Gallon (lbs.)	14.1	13.8	13.8	13.8	13.9	13.8
Directional Reflectance (Cap Y)	88	51	N/A	N/A	N/A	N/A
VOC's-Pounds/Gallon	0.70	0.68	0.63	0.71	0.60	0.70
% Total Pigment (By Weight)	61.4	59.2	60.9	60.7	61.0	60.7
% Total Solids (By Weight)	77.6	77.7	76.8	76.7	76.8	77.3
% Total Non-Volatile Vehicle (By Weight)	43.0	43.0	42.0	42.0	42.0	42.0

Vehicle Type - **Fastrack™ 3427 100% Acrylic Resin**

Franklin Paint Company
259 Cottage Street Franklin, MA 02038
800-486-0304 Fax: 508-528-8152

SAFETY DATA SHEET

SDS Review Date: 06/14/15 ***SDS Version Number: 1***

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1. Product identifier

Product Form: *White Liquid*
Product Name: *Hydrophast*
Product Code: *2014*

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

Use for traffic 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

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
Serious eye damage/eye irritation	*2B*	*H320*
Specific target organ toxicity – single exposure	*3*	*H335*
Carcinogenicity	*1A*	*H350*

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) – **DANGER**

Hazard statements (GHS-US)

Causes eye irritation (H320)
May cause respiratory irritation (H335)
May cause cancer (H350)

Precautionary statements (GHS-US)

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)

Call a POISON CENTER/doctor if you feel unwell. (P312)

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*	*0.2 - 8.0*	*Carc. 2; H351*
Calcium Carbonate	*471-34-1* *207-439-9*	*50.0- 58.2*	

Ethanol (Denatured)	*64-17-5* *200-578-6*	*1.0 - 2.0*	*Flam. Liq. 2: H225*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*25265-77-4* *246-771-9*	*1.0 - 4.0*	
Aqua Ammonia	*7664-41-7* *231-635-3*	*< 1*	*Eye Irrit. 2B;, H320* *STOT SE 3; H335*
Crystalline Silica	*14808-60-7* *EC No. NA*	*0.1 – 0.99*	*Carc. 1A; H350*

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General *No hazards which require special first aid measures.*

Inhalation *If overexposed to mist or dust above published exposure limits, move to fresh air. If symptoms persist, call a physician.*

Skin Contact *Wash off immediately with soap and plenty of water removing all contaminated clothing necessary.*

Eye Contact *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.*

Ingestion *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.*

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. Product contains 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.

This product contains ethyl alcohol: which has been denatured by the addition of additive(s) to render the alcohol unfit for human consumption. Therefore, this product should not be used as an alcoholic beverage.

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

Chemical Name	***ACGIH & Canada***	***OSHA & Mexico***
Titanium Dioxide	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Calcium Carbonate	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Ethanol	*1000 ppm - TWA*	*1000 ppm - TWA*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Not established*	*Not established*
Crystalline Silica	*0.025 mg/m3 8hr TWA*	*10 mg/m3 / (%SiO2+2) 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 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

Protective Measures *Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.*

Hygiene Measures	*Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.*
Respiratory Protection	*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 respirators should be equipped with an ammonia methylamine cartridge and dust/mist filter.*
Hand Protection	*Wear waterproof protective gloves and impervious clothing.*
Eye Protection	*Use safety glasses with side shields, (ANSI Z87.1 or approved equivalent).*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	*White Liquid*
Odor	*Ammonia like*
Odor Threshold	*5 ppm re ATSDR*
pH	*9.7 – 10.7*
Melting / Freezing Point	*32 (°F), 0 (°C)*
Boiling Point	*212 (°F), 100 (°C)*
Flash Point	*Not Applicable*
Evaporation rate	*1 (water = 1)*
Flammability (solid, gas)	*Not applicable*
Lower Explosion Limit	*Not applicable*
Upper Explosion Limit	*Not applicable*
Vapor Pressure	*40 mmHg*
Vapor Density	*Not available*
Density Relative	*1.69*
Density (lbs/gal)	*14.09*
Solubility	*Water miscible*
Wt. % Solids	*77.63*
Vol. % Solids	*61.07*
Wt. % Volatiles	*22.37*
Vol. % Volatiles	*38.91*

Grams VOCs / liter	*83.71*
Wt % HAPs	*0*
Partition coefficient (o/w)	*No data*
Ignition Temp.	*No data*
Autoignition Temp.	*Not applicable*
Decomposition Temp.	*No data*
Oxidizing Properties	*Not applicable*
Explosive Properties	*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

Calcium Carbonate	*Irritating*
Titanium Dioxide	*Irritating*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Rabbit, 24 hr, slight*

Serious Eye Damage/Eye Irritation

Calcium Carbonate	*Irritating*
Titanium Dioxide	*Irritating*

Acute Oral Toxicity

Calcium Carbonate	*LD50 Rat 6450 mg/kg*
Titanium Dioxide	*LD50 Rat > 10000 mg/kg*
Ethanol	*LD50 Rat 7060 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 Rat 3200 mg/kg*

Acute Inhalational Toxicity

Titanium Dioxide	*LC50 Rat inhalation 4 hr (Dust): > 6.82 mg/L*
Ethanol	*LC50 Rat 124. 7 mg/L Inhalation 4 hr*
Ethanol	*LC50 Rat 20000 ppm Inhalation 10 hr*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LC50 Rat inhalation > 3500 mg/m 36 hr*

Acute Dermal Toxicity

Titanium Dioxide	*LD50 skin Rabbit > 15200 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 skin Guinea pig > 19000 mg/kg*

Respiratory/Skin Sensitization *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

Crystalline Silica	*IARC 1, NTP - Known to be a human carcinogen.*
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 primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints."*

Reprotoxicity/Teratogenicity

Ethanol	*Considered teratogenic in alcoholic beverages.*

CMR Assessment *No data*

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Titanium Dioxide	*LC50: >1000 mg/L (Fathead Minnow - 96 hr.)*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*> 77 % (28 d, Ready Biodegradability: CO2 Evolution Test)* *Readily biodegradable*

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

12.5. Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste 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:

Acute Health Hazard	*Yes*
Chronic Health Hazard	*Yes*
Fire Hazard	*No*
Sudden Release of Pressure Hazard	*No*
Reactive Hazard	*No*

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:*

Index No	***Chemical Identification***	***EC No***	***CAS No***
603-002-00-5	*ethanol*	*200-578-6*	*64-17-5*

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

Crystalline Silica (as respirable dust)

State Right to Know Lists	CA	FL	NJ	PA	MN	MA	RI
Calcium Carbonate	*No*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Titanium Dioxide	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Ethanol	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*No*	*No*	*No*	*No*	*No*	*No*	*No*
Crystalline Silica	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*

SECTION 16: OTHER INFORMATION

	Health	Flammability	Physical Hazard
HMIS rating	2*	0	0
NFPA rating	2	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
DOT Department of Transportation
EC50 half maximal effective concentration
EPA Environmental Protection Agency
ERG Emergency Response Guide Book
Flam. Liq. Flammable Liquid

GHS	Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
HAP	Hazardous Air Pollutant
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ID	Identification number
IMDG	International Maritime Dangerous Goods
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
mmHg	millimeters of Mercury
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
o. c.	open cup
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulative, Toxic
RQ	Reportable Quantity
SARA	Superfund Amendments Reauthorization Act
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TPQ	Threshold Planning Quantity
UN	United Nations
VOC	Volatile Organic Compounds
WHMIS	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.*

Franklin Paint Company
259 Cottage Street Franklin, MA 02038
800-486-0304 Fax: 508-528-8152

SAFETY DATA SHEET

SDS Review Date: 06/14/15 ***SDS Version Number: 1***

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1. Product identifier

Product Form: *Yellow Liquid*
Product Name: *Hydrophast*
Product Code: *2015*

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

Use for traffic 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

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
Serious eye damage/eye irritation	*2B*	*H320*
Specific target organ toxicity – single exposure	*3*	*H335*
Carcinogenicity	*1A*	*H350*

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) – **DANGER**

Hazard statements (GHS-US)

Causes eye irritation (H320)
May cause respiratory irritation (H335)
May cause cancer (H350)

Precautionary statements (GHS-US)

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)

Call a POISON CENTER/doctor if you feel unwell. (P312)

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*	*0.2 - 8.0*	*Carc. 2; H351*
Calcium Carbonate	*471-34-1* *207-439-9*	*50.0- 58.2*	

Ethanol (Denatured)	*64-17-5* *200-578-6*	*1.0 - 2.0*	*Flam. Liq. 2: H225*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*25265-77-4* *246-771-9*	*1.0 - 4.0*	
Aqua Ammonia	*7664-41-7* *231-635-3*	*< 1*	*Eye Irrit. 2B;, H320* *STOT SE 3; H335*
Crystalline Silica	*14808-60-7* *EC No. NA*	*0.1 – 0.99*	*Carc. 1A; H350*

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General *No hazards which require special first aid measures.*

Inhalation *If overexposed to mist or dust above published exposure limits, move to fresh air. If symptoms persist, call a physician.*

Skin Contact *Wash off immediately with soap and plenty of water removing all contaminated clothing necessary.*

Eye Contact *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.*

Ingestion *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.*

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. Product contains 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.

This product contains ethyl alcohol: which has been denatured by the addition of additive(s) to render the alcohol unfit for human consumption. Therefore, this product should not be used as an alcoholic beverage.

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

Chemical Name	***ACGIH & Canada***	***OSHA & Mexico***
Titanium Dioxide	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Calcium Carbonate	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Ethanol	*1000 ppm - TWA*	*1000 ppm - TWA*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Not established*	*Not established*
Crystalline Silica	*0.025 mg/m3 8hr TWA*	*10 mg/m3 / (%SiO2+2) 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 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

Protective Measures *Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.*

Hygiene Measures *Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work;*

	apply skin cream.
Respiratory Protection	*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 respirators should be equipped with an ammonia methylamine cartridge and Dust/Mist filter.*
Hand Protection	*Wear waterproof protective gloves and impervious clothing.*
Eye Protection	*Use safety glasses with side shields, (ANSI Z87.1 or approved equivalent).*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	*Yellow Liquid*
Odor	*Ammonia like*
Odor Threshold	*5 ppm re ATSDR*
pH	*9.7 – 10.7*
Melting / Freezing Point	*32 (°F), 0 (°C)*
Boiling Point	*212 (°F), 100 (°C)*
Flash Point	*Not Applicable*
Evaporation rate	*1 (water = 1)*
Flammability (solid, gas)	*Not applicable*
Lower Explosion Limit	*Not applicable*
Upper Explosion Limit	*Not applicable*
Vapor Pressure	*40 mmHg*
Vapor Density	*Not available*
Density Relative	*1.66*
Density (lbs/gal)	*13.84*
Solubility	*Water miscible*
Wt. % Solids	*77.69*
Vol. % Solids	*62.07*
Wt. % Volatiles	*22.32*
Vol. % Volatiles	*37.93*
Grams VOCs / liter	*81.33*
Wt % HAPs	*0*

Partition coefficient (o/w)	*No data*
Ignition Temp.	*No data*
Autoignition Temp.	*Not applicable*
Decomposition Temp.	*No data*
Oxidizing Properties	*Not applicable*
Explosive Properties	*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

Calcium Carbonate	*Irritating*
Titanium Dioxide	*Irritating*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Rabbit, 24 hr, slight*

Serious Eye Damage/Eye Irritation

Calcium Carbonate	*Irritating*
Titanium Dioxide	*Irritating*

Acute Oral Toxicity

Calcium Carbonate	*LD50 Rat 6450 mg/kg*
Titanium Dioxide	*LD50 Rat > 10000 mg/kg*
Ethanol	*LD50 Rat 7060 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 Rat 3200 mg/kg*

Acute Inhalational Toxicity

Titanium Dioxide	*LC50 Rat inhalation 4 hr (Dust): > 6.82 mg/L*
Ethanol	*LC50 Rat 124. 7 mg/L Inhalation 4 hr*
Ethanol	*LC50 Rat 20000 ppm Inhalation 10 hr*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LC50 Rat inhalation > 3500 mg/m 36 hr*

Acute Dermal Toxicity

Titanium Dioxide	*LD50 skin Rabbit > 15200 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 skin Guinea pig > 19000 mg/kg*

Respiratory/Skin Sensitization *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

Crystalline Silica	*IARC 1, NTP - Known to be a human carcinogen.*
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 primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints."*

Reprotoxicity/Teratogenicity

Ethanol	*Considered teratogenic in alcoholic beverages.*

CMR Assessment *No data*

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Titanium Dioxide	*LC50: >1000 mg/L (Fathead Minnow - 96 hr.)*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*> 77 % (28 d, Ready Biodegradability: CO2 Evolution Test)* *Readily biodegradable*

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

12.5. Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste 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:

Acute Health Hazard	*Yes*
Chronic Health Hazard	*Yes*
Fire Hazard	*No*
Sudden Release of Pressure Hazard	*No*
Reactive Hazard	*No*

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:*

Index No	***Chemical Identification***	***EC No***	***CAS No***
603-002-00-5	*ethanol*	*200-578-6*	*64-17-5*

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

Crystalline Silica (as respirable dust)

State Right to Know Lists	CA	FL	NJ	PA	MN	MA	RI
Calcium Carbonate	*No*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Titanium Dioxide	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Ethanol	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*No*	*No*	*No*	*No*	*No*	*No*	*No*
Crystalline Silica	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*

SECTION 16: OTHER INFORMATION

	Health	Flammability	Physical Hazard
HMIS rating	2*	0	0
NFPA rating	2	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
DOT Department of Transportation
EC50 half maximal effective concentration
EPA Environmental Protection Agency
ERG Emergency Response Guide Book
Flam. Liq. Flammable Liquid

GHS	Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
HAP	Hazardous Air Pollutant
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ID	Identification number
IMDG	International Maritime Dangerous Goods
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
mmHg	millimeters of Mercury
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
o. c.	open cup
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulative, Toxic
RQ	Reportable Quantity
SARA	Superfund Amendments Reauthorization Act
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TPQ	Threshold Planning Quantity
UN	United Nations
VOC	Volatile Organic Compounds
WHMIS	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.*

Franklin Paint Company
259 Cottage Street Franklin, MA 02038
800-486-0304 Fax: 508-528-8152

SAFETY DATA SHEET

SDS Review Date: 06/14/15 ***SDS Version Number: 1***

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1. Product identifier

Product Form: *Blue Liquid*
Product Name: *Hydrophast*
Product Code: *2024*

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

Use for traffic 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

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
Serious eye damage/eye irritation	*2B*	*H320*
Specific target organ toxicity – single exposure	*3*	*H335*
Carcinogenicity	*1A*	*H350*

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) – **DANGER**

Hazard statements (GHS-US)

Causes eye irritation (H320)
May cause respiratory irritation (H335)
May cause cancer (H350)

Precautionary statements (GHS-US)

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)

Call a POISON CENTER/doctor if you feel unwell. (P312)

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*	*0.2 - 8.0*	*Carc. 2; H351*
Calcium Carbonate	*471-34-1* *207-439-9*	*50.0- 58.2*	

Ethanol (Denatured)	*64-17-5* *200-578-6*	*1.0 - 2.0*	*Flam. Liq. 2: H225*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*25265-77-4* *246-771-9*	*1.0 - 4.0*	
Aqua Ammonia	*7664-41-7* *231-635-3*	*< 1*	*Eye Irrit. 2B;, H320* *STOT SE 3; H335*
Crystalline Silica	*14808-60-7* *EC No. NA*	*0.1 – 0.99*	*Carc. 1A; H350*

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General *No hazards which require special first aid measures.*

Inhalation *If overexposed to mist or dust above published exposure limits, move to fresh air. If symptoms persist, call a physician.*

Skin Contact *Wash off immediately with soap and plenty of water removing all contaminated clothing necessary.*

Eye Contact *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.*

Ingestion *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.*

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. Product contains 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.

This product contains ethyl alcohol: which has been denatured by the addition of additive(s) to render the alcohol unfit for human consumption. Therefore, this product should not be used as an alcoholic beverage.

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

Chemical Name	***ACGIH & Canada***	***OSHA & Mexico***
Titanium Dioxide	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Calcium Carbonate	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Ethanol	*1000 ppm - TWA*	*1000 ppm - TWA*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Not established*	*Not established*
Crystalline Silica	*0.025 mg/m3 8hr TWA*	*10 mg/m3 / (%SiO2+2) 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 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

Protective Measures *Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.*

Hygiene Measures *Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work;*

	apply skin cream.
Respiratory Protection	*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 Respirators should be equipped with an ammonia methylamine cartridge and Dust/Mist filter.*
Hand Protection	*Wear waterproof protective gloves and impervious clothing.*
Eye Protection	*Use safety glasses with side shields, (ANSI Z87.1 or approved equivalent).*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	*Blue Liquid*
Odor	*Ammonia like*
Odor Threshold	*5 ppm re ATSDR*
pH	*9.7 - 10.7*
Melting / Freezing Point	*32 (°F), 0 (°C)*
Boiling Point	*212 (°F), 100 (°C)*
Flash Point	*Not Applicable*
Evaporation rate	*1 (water = 1)*
Flammability (solid, gas)	*Not applicable*
Lower Explosion Limit	*Not applicable*
Upper Explosion Limit	*Not applicable*
Vapor Pressure	*40 mmHg*
Vapor Density	*Not available*
Density Relative	*1.67*
Density (lbs/gal)	*13.93*
Solubility	*Water miscible*
Wt. % Solids	*76.85*
Vol. % Solids	*60.68*
Wt. % Volatiles	*23.15*
Vol. % Volatiles	*39.32*
Grams VOCs / liter	*71.92*
Wt % HAPs	*0*

Partition coefficient (o/w)	*No data*
Ignition Temp.	*No data*
Autoignition Temp.	*Not applicable*
Decomposition Temp.	*No data*
Oxidizing Properties	*Not applicable*
Explosive Properties	*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

Calcium Carbonate	*Irritating*
Titanium Dioxide	*Irritating*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Rabbit, 24 hr, slight*

Serious Eye Damage/Eye Irritation

Calcium Carbonate	*Irritating*
Titanium Dioxide	*Irritating*

Acute Oral Toxicity

Calcium Carbonate	*LD50 Rat 6450 mg/kg*
Titanium Dioxide	*LD50 Rat > 10000 mg/kg*
Ethanol	*LD50 Rat 7060 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 Rat 3200 mg/kg*

Acute Inhalational Toxicity

Titanium Dioxide	*LC50 Rat inhalation 4 hr (Dust): > 6.82 mg/L*
Ethanol	*LC50 Rat 124. 7 mg/L Inhalation 4 hr*
Ethanol	*LC50 Rat 20000 ppm Inhalation 10 hr*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LC50 Rat inhalation > 3500 mg/m 36 hr*

Acute Dermal Toxicity

Titanium Dioxide	*LD50 skin Rabbit > 15200 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 skin Guinea pig > 19000 mg/kg*

Respiratory/Skin Sensitization *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

Crystalline Silica	*IARC 1, NTP - Known to be a human carcinogen.*
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 primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints."*

Reprotoxicity/Teratogenicity

Ethanol	*Considered teratogenic in alcoholic beverages.*

CMR Assessment *No data*

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Titanium Dioxide	*LC50: >1000 mg/L (Fathead Minnow - 96 hr.)*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*> 77 % (28 d, Ready Biodegradability: CO2 Evolution Test)* *Readily biodegradable*

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

12.5. Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste 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:

Acute Health Hazard	*Yes*
Chronic Health Hazard	*Yes*
Fire Hazard	*No*
Sudden Release of Pressure Hazard	*No*
Reactive Hazard	*No*

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:*

Index No	***Chemical Identification***	***EC No***	***CAS No***
603-002-00-5	*ethanol*	*200-578-6*	*64-17-5*

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

Crystalline Silica (as respirable dust)

State Right to Know Lists	CA	FL	NJ	PA	MN	MA	RI
Calcium Carbonate	*No*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Titanium Dioxide	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Ethanol	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*No*	*No*	*No*	*No*	*No*	*No*	*No*
Crystalline Silica	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*

SECTION 16: OTHER INFORMATION

	Health	Flammability	Physical Hazard
HMIS rating	2*	0	0
NFPA rating	2	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
DOT Department of Transportation
EC50 half maximal effective concentration
EPA Environmental Protection Agency
ERG Emergency Response Guide Book
Flam. Liq. Flammable Liquid

GHS	Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
HAP	Hazardous Air Pollutant
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ID	Identification number
IMDG	International Maritime Dangerous Goods
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
mmHg	millimeters of Mercury
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
o. c.	open cup
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulative, Toxic
RQ	Reportable Quantity
SARA	Superfund Amendments Reauthorization Act
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TPQ	Threshold Planning Quantity
UN	United Nations
VOC	Volatile Organic Compounds
WHMIS	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.*

Franklin Paint Company
259 Cottage Street Franklin, MA 02038
800-486-0304 Fax: 508-528-8152

SAFETY DATA SHEET

SDS Review Date: 06/14/15 ***SDS Version Number: 1***

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1. Product identifier

Product Form: *Brick Red Liquid*
Product Name: *Hydrophast*
Product Code: *2025*

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

Use for traffic 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

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
Serious eye damage/eye irritation	*2B*	*H320*
Specific target organ toxicity – single exposure	*3*	*H335*
Carcinogenicity	*1A*	*H350*

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) – **DANGER**

Hazard statements (GHS-US)

Causes eye irritation (H320)
May cause respiratory irritation (H335)
May cause cancer (H350)

Precautionary statements (GHS-US)

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)

Call a POISON CENTER/doctor if you feel unwell. (P312)

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
Calcium Carbonate	*471-34-1* *207-439-9*	*50.0- 58.2*	
Ethanol (Denatured)	*64-17-5* *200-578-6*	*1.0 - 2.0*	*Flam. Liq. 2: H225*

2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*25265-77-4* *246-771-9*	*1.0 - 4.0*	
Aqua Ammonia	*7664-41-7* *231-635-3*	*< 1*	*Eye Irrit. 2B;, H320* *STOT SE 3; H335*
Crystalline Silica	*14808-60-7* *EC No. NA*	*0.1 – 0.99*	*Carc. 1A; H350*

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General *No hazards which require special first aid measures.*

Inhalation *If overexposed to mist or dust above published exposure limits, move to fresh air. If symptoms persist, call a physician.*

Skin Contact *Wash off immediately with soap and plenty of water removing all contaminated clothing necessary.*

Eye Contact *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.*

Ingestion *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.*

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. Product contains 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.

This product contains ethyl alcohol: which has been denatured by the addition of additive(s) to render the alcohol unfit for human consumption. Therefore, this product should not be used as an alcoholic beverage.

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

Chemical Name	***ACGIH & Canada***	***OSHA & Mexico***
Calcium Carbonate	*10 mg/m^3 - TWA total* *3 mg/m^3 – TWA respirable*	*15 mg/m^3 - TWA total* *5 mg/m^3 - TWA respirable*
Ethanol	*1000 ppm - TWA*	*1000 ppm - TWA*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Not established*	*Not established*
Crystalline Silica	*0.025 mg/m3 8hr TWA*	*10 mg/m3 / (%SiO2+2) 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 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

Protective Measures *Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.*

Hygiene Measures *Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.*

Respiratory Protection *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 respirators should be equipped with an ammonia methylamine cartridge and dust/mist filter.*

Hand Protection *Wear waterproof protective gloves and impervious clothing.*

Eye Protection *Use safety glasses with side shields, (ANSI Z87.1 or approved equivalent).*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	*Brick Red Liquid*
Odor	*Ammonia like*
Odor Threshold	*5 ppm re ATSDR*
pH	*9.7 – 10.7*
Melting / Freezing Point	*32 (°F), 0 (°C)*
Boiling Point	*212 (°F), 100 (°C)*
Flash Point	*Not Applicable*
Evaporation rate	*1 (water = 1)*
Flammability (solid, gas)	*Not applicable*
Lower Explosion Limit	*Not applicable*
Upper Explosion Limit	*Not applicable*
Vapor Pressure	*40 mmHg*
Vapor Density	*Not available*
Density Relative	*1.66*
Density (lbs/gal)	*13.84*
Solubility	*Water miscible*
Wt. % Solids	*77.33*
Vol. % Solids	*61.41*
Wt. % Volatiles	*22.67*
Vol. % Volatiles	*38.59*
Grams VOCs / liter	*75.15*
Wt % HAPs	*0*
Partition coefficient (o/w)	*No data*
Ignition Temp.	*No data*
Autoignition Temp.	*Not applicable*
Decomposition Temp.	*No data*
Oxidizing Properties	*Not applicable*
Explosive Properties	*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

Calcium Carbonate	*Irritating*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*Rabbit, 24 hr, slight*

Serious Eye Damage/Eye Irritation

Calcium Carbonate	*Irritating*

Acute Oral Toxicity

Calcium Carbonate	*LD50 Rat 6450 mg/kg*
Ethanol	*LD50 Rat 7060 mg/kg*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 Rat 3200 mg/kg*

Acute Inhalational Toxicity

Ethanol	*LC50 Rat 124. 7 mg/L Inhalation 4 hr*
Ethanol	*LC50 Rat 20000 ppm Inhalation 10 hr*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LC50 Rat inhalation > 3500 mg/m 36 hr*

Acute Dermal Toxicity

2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*LD50 skin Guinea pig > 19000 mg/kg*

Respiratory/Skin Sensitization	*No information available*
Mutagenicity Assessment	*No information available*
Carcinogenicity	
Crystalline Silica	*IARC 1, NTP - Known to be a human carcinogen.*
Reprotoxicity/Teratogenicity	
Ethanol	*Considered teratogenic in alcoholic beverages.*
CMR Assessment	*No data*

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*> 77 % (28 d, Ready Biodegradability: CO2 Evolution Test)* *Readily biodegradable*

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

12.5. Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste 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:

Acute Health Hazard	*Yes*
Chronic Health Hazard	*Yes*
Fire Hazard	*No*
Sudden Release of Pressure Hazard	*No*
Reactive Hazard	*No*

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:*

Index No	***Chemical Identification***	***EC No***	***CAS No***
603-002-00-5	*ethanol*	*200-578-6*	*64-17-5*

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.*

Crystalline Silica (as respirable dust)

State Right to Know Lists	CA	FL	NJ	PA	MN	MA	RI
Calcium Carbonate	*No*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Ethanol	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
2,2,4-trimethyl-1,3-pentanediol monoisobutyrate	*No*	*No*	*No*	*No*	*No*	*No*	*No*
Crystalline Silica	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*

SECTION 16: OTHER INFORMATION

	Health	Flammability	Physical Hazard
HMIS rating	2*	0	0
NFPA rating	2	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
DOT	Department of Transportation
EC50	half maximal effective concentration
EPA	Environmental Protection Agency
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