

Franklin International

Material Safety Data Sheet

Titebond II Premium Wood Glue

1. Product and company identification

CAS #	: mixture
Synonym	: None known.
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
<u>In case of emergency</u>	: Franklin Security (614) 445-1300
Reference number	: 5000
Product code	: 5002
Date of revision	: 10/28/2014.
Print date	: 11/4/2014.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Chemical family	: Adhesive.
Product use	: Wood Glue
Product type	: Crosslink Polyvinyl Acetate

2. Hazards identification

Emergency overview

Physical state	: Liquid.
Color	: Yellow.
Odor	: Faint odor.
Hazard statements	: MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
Precautionary measures	: Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling.
OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Routes of entry	: Eye contact. Inhalation. Ingestion.
<u>Potential acute health effects</u>	
Inhalation	: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. Slightly irritating to the respiratory system.
Ingestion	: No known significant effects or critical hazards.
Skin	: Slightly irritating to the skin.
Eyes	: Slightly irritating to the eyes.
<u>Potential chronic health effects</u>	
Chronic effects	: No known significant effects or critical hazards.

2. Hazards identification

Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Target organs	: May cause damage to the following organs: skin, eyes. Contains material which may cause damage to the following organs: mucous membranes, upper respiratory tract, eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	: No specific data.
Skin	: Adverse symptoms may include the following: irritation redness
Eyes	: Adverse symptoms may include the following: irritation watering redness
Medical conditions aggravated by over-exposure	: None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
aluminium chloride, anhydrous	7446-70-0	1 - 5

Canada

Name	CAS number	%
aluminium chloride, anhydrous	7446-70-0	1 - 5

Mexico

					Classification			
Name	CAS number	UN number	%	IDLH	H	F	R	Special
aluminium chloride, anhydrous	7446-70-0	Not available.	1 - 5	-	2	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store between the following temperatures: -12.222 to 32.222°C (10 to 90°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
aluminium chloride, anhydrous	OSHA PEL 1989 (United States, 3/1989). Notes: as Al TWA: 2 mg/m ³ , (as Al) 8 hour(s). NIOSH REL (United States, 6/2009). Notes: as Al TWA: 2 mg/m ³ , (as Al) 10 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
aluminium chloride, anhydrous, as Al	AB 4/2009	-	2	-	-	-	-	-	-	-	[3]
	QC 9/2011	-	2	-	-	-	-	-	-	-	[A]

[3]Skin sensitization

Notes: [A]as Al

Mexico

Occupational exposure limits

Ingredient	Exposure limits
aluminium chloride, anhydrous	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 2 mg/m ³ 8 hour(s).

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

8. Exposure controls/personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: >93.3°C (>199.9°F) [Setaflash.]
- Color** : Yellow.
- Odor** : Faint odor.
- pH** : 3
- Boiling/condensation point** : 98.889°C (210°F)
- Relative density** : 1.09
- Volatility** : 52% (w/w)
- Evaporation rate** : <1 (butyl acetate = 1)
- VOC (less water, less exempt solvents)** : 5.5 g/l
- Dispersibility properties** : Dispersible in the following materials: cold water and hot water.
- Physical/chemical properties comments** : VOC = 5.5 g/L

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Hazardous reactions or instability may occur under certain conditions of storage or use.
- Hazardous polymerization** : Hazardous polymerization may occur under certain conditions of storage or use.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
aluminium chloride, anhydrous	LD50 Oral	Rat	3450 mg/kg	-

Chronic toxicity

11. Toxicological information

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
aluminium chloride, anhydrous	Skin - Severe irritant	Mouse	-	10 Percent	-
	Skin - Severe irritant	Pig	-	10 Percent	-
	Skin - Severe irritant	Rabbit	-	10 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
aluminium chloride, anhydrous	LD50 Oral	Rat	3450 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
aluminium chloride, anhydrous	Skin - Severe irritant	Mouse	-	10 Percent	-
	Skin - Severe irritant	Pig	-	10 Percent	-
	Skin - Severe irritant	Rabbit	-	10 Percent	-

Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : This product may irritate eyes upon contact.
- Respiratory** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

11. Toxicological information

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
aluminium chloride, anhydrous	LD50 Oral	Rat	3450 mg/kg	-

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
aluminium chloride, anhydrous	Skin - Severe irritant	Mouse	-	10 Percent	-
	Skin - Severe irritant	Pig	-	10 Percent	-
	Skin - Severe irritant	Rabbit	-	10 Percent	-

Conclusion/Summary

Skin

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Eyes

: This product may irritate eyes upon contact.

Respiratory

: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
aluminium chloride, anhydrous	Acute EC50 460 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1500 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute LC50 3.65 mg/L Fresh water	Daphnia - Daphnia pulex - Adult	48 hours
	Acute LC50 584 to 676 ug/L Fresh water	Fish - Salmo salar - Alevin	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Canada

12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
aluminium chloride, anhydrous	Acute EC50 460 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1500 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute LC50 3.65 mg/L Fresh water	Daphnia - Daphnia pulex - Adult	48 hours
	Acute LC50 584 to 676 ug/L Fresh water	Fish - Salmo salar - Alevin	96 hours

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
aluminium chloride, anhydrous	Acute EC50 460 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1500 ug/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute LC50 3.65 mg/L Fresh water	Daphnia - Daphnia pulex - Adult	48 hours
	Acute LC50 584 to 676 ug/L Fresh water	Fish - Salmo salar - Alevin	96 hours

Persistence/degradability

No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-

14. Transport information

IMDG Class	Not regulated.	-	-	-	-	-
IATA-DGR Class	Not regulated.	-	-	-	-	-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Not regulated.

U.S. Federal regulations : **TSCA 4(a) final test rules**: sodium hydroxymethanesulphinate
TSCA 8(a) PAIR: 1-(2-butoxy-1-methylethoxy)propan-2-ol
TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: aluminium chloride, anhydrous

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
aluminium chloride, anhydrous: reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: ALUMINUM CHLORIDE

New York : None of the components are listed.

New Jersey : The following components are listed: ALUMINUM CHLORIDE

Pennsylvania : The following components are listed: ALUMINUM CHLORIDE (ALCL3)

Canada

WHMIS (Canada) : Class E: Corrosive material

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

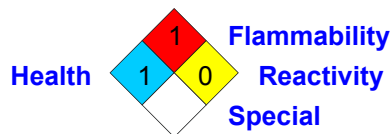
Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

15. Regulatory information

Classification :



International regulations

International lists :

- Australia inventory (AICS): Not determined.
- China inventory (IECSC): Not determined.
- Japan inventory: Not determined.
- Korea inventory: Not determined.
- Malaysia Inventory (EHS Register): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): Not determined.
- Philippines inventory (PICCS): Not determined.
- Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	1
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : 11/4/2014.

Date of issue : 10/28/2014.

Date of previous issue : 4/27/2012.

Version : 1

▣ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.