Franklin International MATERIAL SAFETY DATA SHEET

MSDS Name: Titebond Liquid Hide Glue MSDS Number: 5014 Revision Date: 6/14/04

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATIONProduct Name:Titebond Liquid Hide GlueCAS Number:noneHMIS Hazard Rating:Health: 1 Fire: 1 Reactivity: 0

Company Identification: Franklin International 2020 Bruck Street Columbus OH 43207

Contact: Franklin Technical Services Telephone/Fax: (800) 877-4583 (614) 445-1493 Emergency Phone (24 Hour): Franklin Security (614) 445-1300 Chemtrec (24 Hour): (800) 424-9300 Chemtrec International: (703) 527-3887

| Product Class | Protein dispersion |
|---------------|--------------------|
| Product Use: | wood glue |
| Product Code: | 1103 |

Division: Construction Adhesives & Sealants

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTSHazardous IngredientsCAS NumberPercent

ammonium thiocyanate 1762-95-4 8.30

dicyandiamide 461-58-5 3.70

OSHA PELs & ACGIH TLVs are listed in Section 8 where applicable.

SECTION 3 - HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: An amber colored liquid with little odor. Slippery in the wet state. ROUTES OF ENTRY: Inhalation: yes Ingestion: yes Skin: no Eye: yes INHALATION: May be irritating to upper respiratory tract.

INGESTION:

Single dose oral toxicity is considered to be extremely low. No hazards expected from swallowing small amounts incidental to normal handling operations. Ingestion may cause gastrointestinal irritation. SKIN: Prolonged or repeated skin contact can cause irritation. EYE: Mildly irritating to eyes. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None expected in normal use. CARCINOGENICITY: IARC: No NTP: No OSHA: No **REPRODUCTIVE TOXICITY:** None anticipated based on product formula. TARGET ORGANS: Target organs: eyes, skin, and respiratory system.

SECTION 4 - FIRST AID MEASURES

INHALATION:

Remove to fresh air. If difficulty persists, seek medical attention. INGESTION: If swallowed, call poison control center immediately. Follow their specific instructions. Do not induce vomiting. SKIN: Wash with soap and water. Contact a physician if irritation develops or persists. EYE: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Seek medical attention.

SECTION 5 - FIRE-FIGHTING MEASURES Flammability Class (OSHA) IIIB Flash Point: > 200 F Setaflash Explosive Range: Not applicable

EXTINGUISHING MEDIA:

Use alcohol foam, carbon dioxide, water spray, or ABC dry chemical when fighting fires involving this product. HAZARDOUS COMBUSTION PRODUCTS: Not applicable (water based product). However, solid material will support combustion if water has evaporated.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CONTAINMENT TECHNIQUES:

Use inert absorbent to dike the spill. Keep away from drains. CLEAN-UP: If possible pump liquid into an approved container or spread absorbent over spill and shovel product/absorbent mixture into an approved container. If product has dried scrape up and place in an approved container. EMERGENCY MEASURES: None required.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash hands before eating. STORAGE: Keep from freezing. Best when stored above 40 F (4 C).

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION Occupational Exposure Limits ACGIH TLV ACGIH TLV-C ACGIH STEL OSHA STEL OSHA PEL

ammonium thiocyanate

N/est N/est N/est N/est N/est dicyandiamide N/est N/est N/est N/est N/est

ENGINEERING CONTROLS:

Natural ventilation should be adequate under normal conditions.

Maintain standard plant ventilation.

OTHER:

Facilities storing or utilizing any chemical should be equipped with an eyewash facility and a safety shower.

RESPIRATORY PROTECTION:

Respiratory protection is not expected to be necessary under normal use. Follow requirements for respiratory protection in OSHA 1910.134. EYE PROTECTION:

Chemical splash goggles (ANSI Z87.1 or approved equivalent). SKIN PROTECTION:

Where skin contact can occur, wear impervious gloves.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES Form: Liquid Appearance/Color: Amber Odor: Slight Solubility (in water): Complete pH Value: 6.5 Boiling Range/Point: 212.øF Evaporation Rate: Slower than n-Butyl Acetate

% Volatile: 48.%

Specific Gravity:1.15VOC:0

SECTION 10 - STABILITY AND REACTIVITY Stability: This product is stable Hazardous Polymerization: Hazardous polymerization will not occur

CONDITIONS TO AVOID: High temperatures promote hydrolysis. INCOMPATIBLITY: Strong acids and strong bases

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute and chronic health effects are not expected as long as good industrial hygeine and safety precautions are followed.

SECTION 12 - ECOLOGICAL INFORMATION

This formulation has not been tested for environmental effects.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Disposal of this product must comply with all applicable federal, state and local regulations. CONTAINER DISPOSAL: Disposal of this container should comply with all applicable federal, state and local regulations.

SECTION 14 - TRANSPORT INFORMATION

| UN Number | none |
|-----------------|--------------|
| UN Pack Group | N/A |
| UN Class | Nonhaz |
| ICAO/IATA Class | Nonhazardous |
| IMDG Class | Nonhazardous |
| Shipping Name | Nonhazardous |

Packaging may not be approved for shipping by air. Please contact Franklin International for further information.

SECTION 15 - REGULATORY INFORMATION

TSCA (Toxic Substances Control Act Inventory): All components of this product are listed on the TSCA inventory except as exempted. PENNSYLVANIA: Hazardous components required to be listed at 1% or more: ammonium thiocyanate; thiocyanic acid, ammonium salt; 1762-95-4 Non-hazardous components required to be listed at 3% or more: dicyandiamide 461-58-5; hide glue 9007-34-5; water 7732-18-5 NEW JERSEY:

powdered hide glue 9007-34-5; water 7732-18-5; ammonium thiocyanate 1762-95-4; dicyandiamide 461-58-5; polyalkene glycol 9038-95-3

SECTION 16 - OTHER INFORMATION

DISCLAIMER:

While the information and recommendations set forth herein are believed to be accurate as of the data hereof, Franklin International makes no warranty, express or implied, with respect thereto and disclaims all liability from reliance thereon.