



Intelligent Flooring System (IFS) Urethane

PRODUCT DESCRIPTION:

Intelligent Flooring System (IFS) Urethane Formula is an all-in-one multifunctional wood flooring installation system. IFS Urethane Formula is for installing solid wood flooring (all thickness), exotic species Bamboo, Teakwood and can be used to install all engineered wood flooring. The IFS system is much more than a wood flooring adhesive, it is a proprietary urethane formula. When used in conjunction with the “patented trowel” and the IFS installation instructions it provides a multitude of additional benefits and value over a standard wood flooring installation. IFS is designed to replace ALL other time consuming, expensive multi-step underlayment systems. IFS replaces and provides better protection and value than trowel applied sub-floor sealers designed for sub-floor moisture protection, in addition, it also replaces the multi-step “double-glue” underlayment systems (foam and cork) that are used for acoustical purposes. This formula is a special blend sub-floor moisture sealer/acoustical barrier/premium adhesive and sub-floor crack isolator.

IFS is environmentally friendly, and LEED Compliant.

IFS not only meets, but in almost every category exceeds the protections and standards provided by the “best” single purpose products currently on the market. The sub-floor moisture protection of IFS exceeds the “best” competing trowel applied sub-floor moisture sealers, does not require pre-application moisture testing, and provides the most comprehensive warranty protection. The acoustical standards and benefits of IFS (STC 67, IIC 69, Delta IIC 21 per independent lab test results, over standard 6” concrete sub-floor). The acoustical values of IFS far exceed the most stringent building standards, and exceed single-purpose acoustical underlayment products, (foam or cork).

NOTE: IFS was not designed as a moisture remediation/abatement product. IFS will provide sub-floor moisture protection, it was designed to protect wood flooring from moisture spikes and fluctuations after the floors are installed. If you encounter a problematic high moisture slab that has a history of moisture problems, identify and eliminate the source of the moisture before proceeding with the installation. Slabs that have a history of high moisture problems may have a “hydrostatic head”, pressure associated with the moisture – no product will withstand “severe hydrostatic head” – the only solution is to identify and eliminate the source.

GENERAL PRODUCT INFORMATION:

IT IS EXTREMELY IMPORTANT: IN ORDER FOR THIS PRODUCT TO PROVIDE ALL THE BENEFITS AND PERFORM PROPERLY, IT IS ESSENTIAL THAT A FEW SIMPLE

BUT CRITICAL INSTRUCTIONS AND PROCEDURES BE FOLLOWED CAREFULLY AND COMPLETELY.

1. In order to promote the proper formation of a solid barrier between the wood flooring and the sub-floor it is **ESSENTIAL** that the sub-floor be flat, without dips (birdbaths) and sudden rises (more than 1/16" in 4' or 1/8" in 8'). This requires carefully inspecting, identifying, and correcting **ALL** low spots or high areas prior to starting the installation. Use a long "straight edge".
2. IFS **MUST** be applied with the special trowel applicator supplied with each pail. The special applicator is a replaceable blade that is attached to the lid of each pail, and **MUST** be changed every time a new pail (4 gal.) is opened. Using the trowel blade longer than one 4 gallon pail (112 sf.) will create excessive wear and **VOID** all warranties. Using any other trowel or applicator will also void all warranties and will yield unsatisfactory results. The special blades attached to the lid of each pail will only work and fit into the Gundlach Inject Blade trowel handle.
3. In order to promote the proper formation of the barrier, it is **ESSENTIAL** that the installer walks on the most recent installed floor every 15 –20 minutes. Walk the entire surface of the newly installed floor.

APPROVED SUB-FLOORS:

IFS is approved for a wide variety of sub-floors and constructions, including concrete, lightweight concrete (sealed with latex sealer) terrazzo, plywood, OSB, Advantech OSB, sheet or vinyl tile provided it is firmly attached to the sub-floor, radiant heated floors, including multi-level construction.

SUB-FLOOR AND JOBSITE PREPARATION:

1. All sub-floors must be clean and sound. The sub-floor must be free of oils, dirt, dust, repellent sealers, drywall plaster and any material that would interfere with a good bond.
2. The pH of concrete should be between 7-9. If not, take corrective measures before proceeding.
3. **IT IS ESSENTIAL THAT THE SUB-FLOOR BE FLAT, WITHOUT DIPS AND HIGH SPOTS (not to exceed 1/16" IN 4' RADIUS OR 1/8" IN 8' RADIUS).** The installer must first check the entire sub-floor, preferably, with a straight edge (6' or longer), identify and eliminate **ALL** dips and/or high spots before proceeding with the installation of the wood. Flat sub-floors are critical to obtaining 100% barrier formation for moisture protection. When using IFS strictly as an acoustical barrier in multi-level construction sub-floor flatness is not as critical.
4. Concrete must be cured a minimum of 40 days, and appear visually dry.
5. HVAC should be operational. Application temperature range 55F - 85F.

INSTALLING THE WOOD:

1. The requirements of “Sub-Floor and Jobsite Preparation”, above must be met before starting the installation of the wood flooring.
2. Follow the wood manufacturers’ instructions for layout and expansion space requirements.
3. Remove the blade from the pail lid and insert into the Injecta-Blade trowel handle. The use of any other applicator or trowel will void all warranties and yield unsatisfactory results.
4. Spread comfortable working widths of IFS onto the sub-floor with the special blade, 18” - 27” width is ideal.
5. Immediately install the wood flooring.
6. **EXTREMELY IMPORTANT** to obtaining a good moisture seal: After a few rows are installed, walk the entire surface of the most recently installed wood floor, repeat every 15 to 20 minutes. This step is not necessary if the objective is to **ONLY** obtain the acoustical benefits in multi-level construction.
7. Repeat steps 3 – 6 until the job is complete

CLEAN-UP:

Clean the flooring surface and tools with Mineral Spirits. Extra effort will be required to remove IFS after 24 – 48 hours.

STORAGE/SHELF LIFE:

Shelf life is one year from date of manufacture, in unopened container.

WARRANTY:

Para-Chem warrants Intelligent Flooring System one-step all-in-one product will bond wood flooring, including solids to concrete, terrazzo, plywood, OSB, AdvanTech OSB, vinyl tile, sheet vinyl and radiant heated sub-floors, and sub-floor materials used in multi-level residential construction for a period equal to the wood flooring manufacturer’s product warranty life. This warranty is exclusive to the original purchaser of the installation, and may not be assigned or transferred. It is further warranted that Intelligent Flooring System will protect engineered wood flooring against sub-floor moisture damage, for the life of the floor to the original purchaser, provided **ALL** directions and instructions of the label and lid sticker are completely followed. It is further warranted to provide the acoustical benefits as tested and verified by independent lab tests. A copy of the acoustical lab test results are available upon request.

In the event of a failure due to defective or out-of-spec product, Para-Chem will offer a one-time replacement of material and reasonable labor to replace the portion of the floor that has failed due to defective product.

Hollow spots are not an indication of adhesive failure, but are due to uneven sub-floors (especially on concrete sub-floors). Uneven sub-floors will not only result in hollow spots, but

also prevent 100% formation of the sub-floor moisture barrier and put the wood floor at risk of sub-floor moisture damage. To prevent hollow areas and to protect the wood floor from risks sub-floor moisture damage the sub-floor must be smooth within the standards outlined in the “Sub-Floor Preparation” section of the label.

Para-Chem specifically excludes and is not liable for any other damages or loss, including consequential or incidental damage or loss.

WARRANTY CONTINGENCIES:

The installation must be in full compliance with the wood manufacturers’ recommendations and in full compliance with all IFS instructions. Para-Chem is provided an adequate opportunity for an on site evaluation and/or subsequent testing of a potential claim prior to any repair or replacement. Failure to do so will release Para-Chem of any financial obligation to the claim.

SAFETY DATA

READ MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION

Flash Point: 142° F (61° C)

WARNING: Combustible liquid and vapor. Keep away from sparks and flame.

PRECAUTIONS:

EYE/FACE PROTECTION: Safety glasses with side shields, or goggles.

SKIN PROTECTION: Chemical-resistant rubber or plastic.

RESPIRATORY PROTECTION: NOISH approved organic respirator if TLV is exceeded.
(Respirator not required for outdoor applications.)

FIRST AID:

EYE CONTACT: Flush with water for 15 minutes. Call physician if irritation persists.

SKIN CONTACT: Remove affected clothing. Wash with soap and water. Seek medical attention if irritation persists.

INHALATION: Move to fresh air. Administer oxygen if necessary. Seek medical attention.

INGESTION: Seek immediate medical attention. Do not induce vomiting. Rinse mouth with water, Never give anything by mouth to an unconscious person.

For industrial use only.

KEEP OUT OF THE REACH OF CHILDREN.

MATERIAL SAFETY DATA SHEET

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Para-Chem, Inc[®], PO Box 127, Simpsonville, SC 29681

24-Hour Emergency Telephone: (864) 967-7691

SECTION 1. PRODUCT IDENTIFICATION

PRODUCT NAME: IFS Urethane Adhesive

CHEMICAL FAMILY: Aromatic isocyanate prepolymer adhesive composition

SECTION 2. HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>% by Weight</u> | <u>Exposure Limits</u> |
|---|-------------------|--------------------|------------------------------------|
| Polymeric Diphenylmethane Diisocyanate | 9016-87-9 | 3 - 7 | 0.05 mg/m ³ (ACGIH TLV) |
| C ₁₀ -C ₁₃ Isoalkanes | 68551-17-7 | 5 - 10 | None Established |

SECTION 3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Eyes, Skin, Inhalation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory problems (asthma).

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: May cause slight to moderate irritation.

SKIN CONTACT: May cause slight to severe irritation depending upon length and frequency of exposure. Can cause sensitization.

INGESTION: Will cause adverse health effects.

INHALATION: May cause irritation to respiratory tract including nausea and/or headache. Can cause sensitization resulting in chemical asthma symptoms.

CHRONIC: Prolonged exposure to isocyanate vapors can result in lung damage.

SECTION 4. FIRST AID MEASURES

EYE CONTACT: Flush with water for 15 minutes. Call physician if irritation occurs.

SKIN CONTACT: Wash with soap and water.

INHALATION: Move person to fresh air. Administer oxygen if necessary. Seek medical attention if symptoms persist.

INGESTION: Do not induce vomiting. Get immediate medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

FLASH POINT (°F): > 142 (61° C)

FIRE-FIGHTING INSTRUCTIONS: Use CO₂, dry chemical, chemical foam for fighting fire. Wear protective clothing and self-contained breathing apparatus. Material releases CO₂ when contaminated with moisture, and can pressurize containers and explode.

DECOMPOSITION PRODUCTS: Dried material may produce CO, CO₂, H₂O, N_xO, and other products from the burning of hydrocarbons.

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Shovel or scoop material into secure container for disposal. Contaminated material that has come into contact with or absorbed moisture will evolve CO₂ gas and should not be stored under air tight seal for 24 hours. Dispense sand, sawdust, or vermiculite and absorb spill residue. Collect and place in waste container. Wash area thoroughly with solution of 8 % ammonia, 2 % detergent, and 90 % water.

SECTION 7. HANDLING AND STORAGE

HANDLING: Use good hygienic practices. (Wash hands before eating, using washroom, or smoking.) Keep out of the reach of children. Do not breathe vapors.

STORAGE: Material must be stored under air tight conditions to prevent exposure to moisture. Do not open containers until ready for use. If containers show signs of pressurization, trained personnel should clear area, cover container with tarp, and puncture lid with a long handled spike to relieve pressure. Store above 40° F in a cool, dry location away from moisture sources.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Wear safety glasses with side shields or splash goggles where contact with material is likely.

SKIN PROTECTION: Wear chemical resistant rubber gloves where contact with material is likely.

RESPIRATORY PROTECTION: Where TLV can be exceeded wear NOISH approved organic vapor respirator or use positive pressure supplied breathing air source.

ENGINEERING CONTROLS: Normal exhaust ventilation where TLV can be maintained. Site specific exhaust where processing conditions or exposure to fumes and vapors exceed the permissible TLV.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F): No information.

SPECIFIC GRAVITY (WATER = 1): 1.26

VAPOR PRESSURE: No information

VAPOR DENSITY (air=1): No information. Expected to be heavier than air.

% VOLATILE BY WEIGHT: No information.

pH: Not applicable.

APPEARANCE AND ODOR: Thick light brown colored liquid with mild sweet odor.

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Moisture, excessive heat. Do not mix with water, strong bases, or alcohols.

HAZARDOUS DECOMPOSITION PRODUCTS: See Section 5.

MATERIAL SAFETY DATA SHEET

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SECTION 11. TOXICOLOGICAL INFORMATION

Polymeric Diphenylmethane Diisocyanate: Acute Dose Toxicity: Oral LD₅₀ > 5000 mg/kg (rat)

Inhalation LC₅₀ = 490 mg/m³/4 hr (rat) Dermal LD₅₀ > 5000 mg/kg (rabbit)

C₁₀-C₁₃ Isoalkanes: Acute Dose Toxicity: Oral LD₅₀ - 34600 mg/kg (rat)

Inhalation LC₅₀ > 1277 ppm/6 hr (rat) Dermal LD₅₀ - 15400 mg/kg (rabbit)

SECTION 12. ECOLOGICAL INFORMATION

Not readily biodegradable.

SECTION 13. DISPOSAL CONSIDERATIONS

Uncured product is hazardous waste. Incinerate in accordance with federal, state, and local environmental controls/regulations. Cured product is non-hazardous waste and should be disposed of in accordance with same federal, state and local regulations.

SECTION 14. TRANSPORT INFORMATION

For domestic transportation purposes, this product is not designated as a hazardous material by the U.S. Department Of Transportation.

SECTION 15. REGULATORY INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.

SARA TITLE III:

Section 311 and 312 Health and Physical Hazards:

| Immediate | Delayed | Fire | Pressure | Reactivity |
|-----------|---------|------|----------|------------|
| [X] | [X] | [] | [] | [] |

Section 313 Reportable Chemicals: No components at or above EPA reporting thresholds.

VOLATILE ORGANIC CHEMICALS: No information.

SECTION 16. OTHER INFORMATION

HMIS RATINGS: Health = 1* Flammability = 1 Reactivity = 0
 Personal Protective Equipment = C * Denotes chronic exposure hazard
Hazard rating scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe

Para-Chem, Inc. believes the statements, technical information and recommendations contained herein are reliable. They are given without warranty or guarantee of any kind, expressed or implied.

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