

Industry's #1 FRP Adhesive

# FAST GRAB FRP

## Construction Adhesive

**Titebond® GREENchoice™ Fast Grab FRP Construction Adhesive is a professional-strength adhesive specifically formulated for the installation of FRP (fiber-reinforced plastic) panels over most porous surfaces. Its fast grab and bonding power greatly reduce the need for extended bracing. This VOC-compliant, nonflammable formula is environmentally safe, emitting no harmful fumes and promoting healthy living and working environments.**

### Recommended For

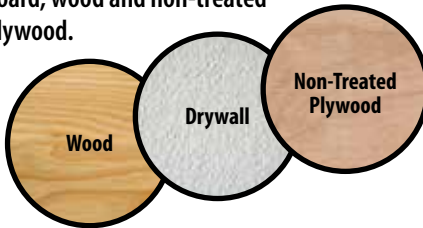
Installing FRP (fiber-reinforced plastic), plastic laminate, wainscoting and other wall coverings over many common porous surfaces.

### Specifications & Certifications

Meets LEED v4, SCAQMD, CARB and NAHB Green Building specifications. FDA and Canadian Food Inspection Agency (CFIA) approved for indirect food contact. Exceeds the performance requirements of ASTM C557.

### Compatible Materials

FRP to many common porous building materials including unprimed/unpainted drywall, tile board, fiber cement backer board, wood and non-treated plywood.



### GREENchoice Water-Based

VOC-compliant

Quick grab

Nonflammable

No offensive odor

Cleans easily with water  
in wet state

Achieves NFPA Class A fire rating



**Titebond®**  
**THE PRO'S ADVANTAGE**

## Ordering/Sku Information

Size	Part Number	UPC	Case UPC	Weight	Units Per Package	Packages Per Pallet
28 Oz. Cartridge	4052	037083040524	10037083040521	34.63 lbs.	12	44
1 Gallon Pail	4056	037083040562	10037083040569	24.70 lbs.	2	75
3.5 Gallon Pail	4059	037083040593	NA	43.77 lbs.	1	36
4 Gallon Pail	4054	037083040548	NA	50.58 lbs.	1	36

## Technical Information

- **Application Temperature:** Over 50°F and below 90°F for adhesive and substrates
- **Service Temperature:** 0°F to 110°F
- **Coverage:** 50 sq. ft. per gallon
- **Working Time:** 20 minutes at 70°F

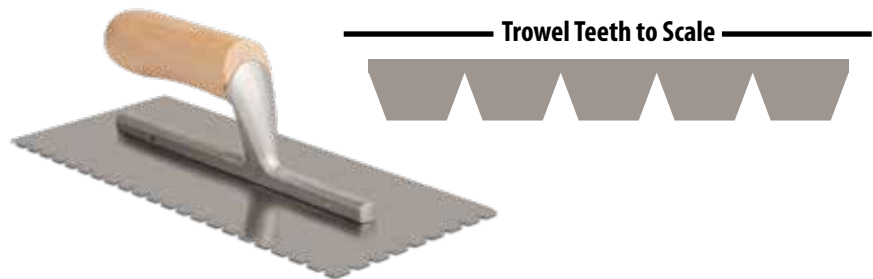
## Physical Properties

- **Type:** Proprietary emulsion polymer
- **State:** Low viscosity mastic
- **Color:** Light beige
- **Solids:** 67%
- **Viscosity:** 100,000 cps
- **pH:** 5.0
- **VOC:** < 50 g/L
- **Weight/Gallon:** 11.6 lbs.
- **Flashpoint:** > 200°F
- **Freeze/Thaw Stability:** Stable
- **Storage Life:** Up to 2 years in unopened container stored above 50°F

## Directions

**PREP:** Surfaces must be dry and free of any material that may deter adhesion, including severe and thick amounts of drywall joint compound. Patch holes and depressions and remove any bumps or high spots, dust, oil, and grease. Concrete surfaces must be well cured and completely dry.

**APPLICATION:** Cut and pre-fit all panels. Lay fiberglass panels flat and let them acclimate to room temperature 24 hours before installing. **Note:** Do not use when temperature, adhesive or materials are below 50°F. **SPREAD ADHESIVE OVER ENTIRE BACK OF PANEL, USING A V-NOTCH TROWEL WITH NOTCHES 3/16" WIDE X 1/4" DEEP AND SPACED 1/2" CENTER TO CENTER (SEE DIAGRAM).**



Keep trowel notches clean and free of adhesive build-up to ensure proper application. Immediately place panel against surface and press firmly over entire surface, working from the edge of the panel where molding is installed outwards to the open edge. Using a roller over the entire installed wall panel is also recommended. **Note:** Bracing may be required if walls or panels are not flat. Panels used in conjunction with channel moldings should NOT fit tightly into the moldings. Leave a small area in the molding for expansion and follow panel manufacturer's recommendations. Any holes drilled through the FRP for fasteners, pipes or conduits should be oversized to allow for natural movement of the panel. When installing FRP panels over below grade concrete or block walls where moisture can penetrate from the back, attach furring strips with mechanical fasteners and Titebond Fast Set Polyurethane or Titebond Heavy Duty Construction Adhesive and then adhere a solid backing to the furring strips. Spread no more adhesive than can be installed in 20 minutes or less.

**CLEANUP:** Tools and adhesive may be cleaned with water while the adhesive is wet. If dried, tools and adhesive may be cleaned with water/acetone/vinegar mixture. Follow solvent vendor's precautions.

## User Tips

Do not bond two non-porous substrates together such as FRP, metal, plastic, foam board, sealed concrete, fiberglass face, or mold-resistant or painted gypsum wallboard, or any other non-porous surfaces. For installations bonding two non-porous substrates together use Titebond GREENchoice Advanced Polymer Panel Adhesive. For installations over treated plywood use Titebond Solvent Based FRP Adhesive or GREENchoice Advanced Polymer Panel Adhesive. The optimal trowel for best overall performance and coverage is a v-notch trowel, 3/16" wide x 1/4" deep, spaced 1/2" c.c. Trowels using dimensions other than the optimal size can be used, but they may affect working time and coverage. For additional trowel recommendations, please contact Franklin Technical Service at 1.800.347.4583.

**GREENchoice**  
Water-Based

Visit [Titebond.com](http://Titebond.com) for the most up-to-date product information.

Franklin International



Columbus, Ohio 43207 614.443.0241 Technical Service 1.800.347.4583 © 2019 01346\_3873bcm FF824

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# Franklin International


## Safety Data Sheet

### Titebond Solvent Based FRP Adhesive

#### Section 1. Identification

<b>GHS product identifier</b>	: Titebond Solvent Based FRP Adhesive
<b>Product type</b>	: Liquid.
<b>Address</b>	: Franklin International 2020 Bruck Street Columbus OH 43207
<b>Contact person</b>	: Franklin Technical Services
<b>Telephone</b>	: (800) 877-4583
<b>In case of emergency</b>	: Franklin Security (614) 445-1300
<b>Reference number</b>	: 3103
<b>Product code</b>	: 3227
<b>Date of revision</b>	: 3/12/2018
<b>Print date</b>	: 3/12/2018
<b>Chemtrec (24 Hour)</b>	: (800) 424 - 9300
<b>Chemtrec International</b>	: (703) 527 - 3887
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	: Not applicable.

#### Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), kidneys, liver) (inhalation) - Category 2
<b>GHS label elements</b>	
<b>Hazard pictograms</b>	: 
<b>Signal word</b>	: Danger
<b>Hazard statements</b>	: Highly flammable liquid and vapor. Causes skin and eye irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure if inhaled. (central nervous system (CNS), kidneys, liver)
<b>Precautionary statements</b>	
<b>General</b>	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

## Section 2. Hazards identification

- Prevention** : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling.
- Response** : Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Avoid contact with skin and clothing. Wash thoroughly after handling.
- Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

### Hazardous ingredients

#### United States

Name	CAS number	%
n-hexane	110-54-3	10 - 25
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	0.1 - 0.5

#### Canada

Name	CAS number	%
n-hexane	110-54-3	10 - 25
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5 - 10

#### Mexico

Name	CAS number	UN number	%	IDLH	Classification			
					H	F	R	Special
n-hexane Distillates (petroleum), hydrotreated heavy naphthenic	110-54-3	UN1993	10 - 25	1100 ppm 2500 mg/m <sup>3</sup>	1	3	1	-
	64742-52-5	Not available.	5 - 10		1	1	0	-

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Can cause central nervous system (CNS) depression.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

## Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**Special protective actions for fire-fighters** : 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**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). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



## Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 43.333°C (110°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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.

## Section 8. Exposure controls/personal protection

### Control parameters

### United States

### Occupational exposure limits

Ingredient name	Exposure limits
n-hexane	<p><b>OSHA PEL 1989 (United States, 3/1989).</b>            TWA: 50 ppm 8 hours.            TWA: 180 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2013).</b>            TWA: 50 ppm 10 hours.            TWA: 180 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 3/2016). Absorbed through skin.</b>            TWA: 50 ppm 8 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 500 ppm 8 hours.            TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>

### Canada

## Section 8. Exposure controls/personal protection

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	Notations
n-hexane	US ACGIH 3/2016	50	-	-	-	-	-	-	-	-	[1]
	AB 4/2009	50	176	-	-	-	-	-	-	-	[1]
	BC 7/2016	20	-	-	-	-	-	-	-	-	[1]
	ON 7/2015	50	-	-	-	-	-	-	-	-	[1]
	SK 7/2013	-	-	50 PPM	-	-	62.5 PPM	-	-	-	[1]
Distillates (petroleum), hydrotreated heavy naphthenic	US ACGIH 3/2016	-	5	-	-	-	-	-	-	-	[a]
	AB 4/2009	-	5	-	-	10	-	-	-	-	[b]

[1]Absorbed through skin.

Form: [a]Inhalable fraction [b]Mist

### Mexico

#### Occupational exposure limits

Ingredient	Exposure limits
n-hexane	<b>NOM-010-STPS-2014 (Mexico, 4/2016). Absorbed through skin.</b> LMPE-PPT: 50 ppm 8 hours.
Distillates (petroleum), hydrotreated heavy naphthenic	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> LMPE-PPT: 5 mg/m <sup>3</sup> 8 hours. Form: mist

**Consult local authorities for acceptable exposure limits.**

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

**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.

**Eye/face protection** : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection

**Hand protection** : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.



## Section 8. Exposure controls/personal protection

- Body protection** : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid. [Paste.]
- Color** : Beige.
- Odor** : Solvent(s) [Slight]
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : 61.667°C (143°F)
- Flash point** : Closed cup: <-17.778°C (<-0.0004°F) [Setaflash.]
- Flammability (solid, gas)** : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
- Lower and upper explosive (flammable) limits** : Lower: 1.2%  
Upper: 7.5%
- VOC (less water, less exempt solvents)** : 259 g/l
- Relative density** : 1.26
- Solubility** : Insoluble in the following materials: cold water and hot water.

### Aerosol product

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Dermal	Rabbit	>3295 mg/kg	-
	LD50 Oral	Rat	15840 mg/kg	-
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	LD50 Oral	Rat	4880 mg/kg	-

**Conclusion/Summary** : Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-hexane	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-

#### Conclusion/Summary

- Skin** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Eyes** : Severely irritating to eyes.
- Respiratory** : High vapor concentrations can cause headaches, dizziness, drowsiness and nausea and may lead to unconsciousness.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Titebond Solvent Based FRP Adhesive	Category 3	Not applicable.	Narcotic effects
n-hexane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Titebond Solvent Based FRP Adhesive	Category 2	Inhalation	central nervous system (CNS), kidneys and liver
n-hexane	Category 1	Inhalation	peripheral nervous system

#### Aspiration hazard

Name	Result
n-hexane	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Can cause central nervous system (CNS) depression.

#### Symptoms related to the physical, chemical and toxicological characteristics

## Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
n-hexane	Acute EC50 0.89 mg/l	Algae	96 hours
	Acute EC50 3.9 mg/l	Crustaceans	48 hours
	Acute LC50 2.5 mg/l	Fish - fathead minnow	96 hours
	Chronic NOEC 4.9 mg/l	Crustaceans	21 days
	Chronic NOEC 2.8 mg/l	Fish - rainbow trout	28 days

- Conclusion/Summary** : Not available.

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-hexane	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
n-hexane	4	501.187	high
6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol	6.25	549.54	high








- Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Disposal methods

: The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
<b>UN number</b>	UN1133	1133	1133	1133	1133	1133
<b>UN proper shipping name</b>	ADHESIVES, containing flammable liquid	ADHESIVES, containing flammable liquid	ADHESIVES, containing flammable liquid	ADHESIVES, containing flammable liquid	ADHESIVES, containing flammable liquid	ADHESIVES, containing flammable liquid
<b>Transport hazard class(es)</b>	3  	3 	3 	3 	3 	3 
<b>Packing group</b>	III	III	III	III	III	III
<b>Environmental hazards</b>	Yes.	No.	No.	No.	No.	No.
<b>Additional information</b>	This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).	-	<b>Special provisions</b> 640 (E) <b>Tunnel code</b> (D/E)	-	The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Section 14. Transport information**

	<p>173.24a.</p> <p><b>Reportable quantity</b>                  25027 lbs /                  11362.3 kg                  [2382.2 gal /                  9017.7 L]                  Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p>					
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**Special precautions for user** : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**Section 15. Regulatory information**

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**United States inventory (TSCA 8b):** All components are listed or exempted.  
**Commerce control list precursor:** 2-diethylaminoethanol

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**SARA 302/304**

**Composition/information on ingredients**

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312**

**Classification** : Fire hazard  
 Immediate (acute) health hazard  
 Delayed (chronic) health hazard

**Composition/information on ingredients**

**Section 15. Regulatory information**

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
n-hexane 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	10 - 25 0.1 - 0.5	Yes. Yes.	No. No.	No. No.	Yes. No.	Yes. Yes.

**SARA 313**

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	n-hexane	110-54-3	10 - 25
<b>Supplier notification</b>	n-hexane	110-54-3	10 - 25

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

- Massachusetts** : The following components are listed: HEXANE; N-HEXANE; OIL MIST, MINERAL
- New York** : The following components are listed: Hexane
- New Jersey** : The following components are listed: n-HEXANE; HEXANE; MINERAL OIL (UNTREATED and MILDLY TREATED)
- Pennsylvania** : The following components are listed: HEXANE

**California Prop. 65**

Not available.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Not applicable.				

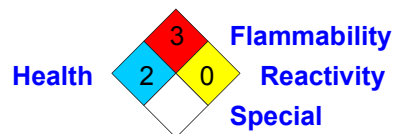
**Canada****Canadian lists**

- Canadian NPRI** : The following components are listed: n-Hexane
- 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**

**Classification** :

**International regulations**

- International lists** :
- Australia inventory (AICS)**: Not determined.
  - China inventory (IECSC)**: Not determined.
  - Japan inventory (ENCS)**: Not determined.
  - Japan inventory (ISHL)**: Not determined.
  - Korea inventory**: Not determined.
  - Malaysia Inventory (EHS Register)**: Not determined.
  - New Zealand Inventory of Chemicals (NZIoC)**: Not determined.



## Section 15. Regulatory information

Philippines inventory (PICCS): Not determined.  
 Taiwan Chemical Substances Inventory (TCSI): Not determined.  
 Turkey inventory: Not determined.

Europe : Not determined.

Chemical Weapons : Not listed

Convention List Schedule  
I Chemicals

Chemical Weapons : Not listed

Convention List Schedule  
II Chemicals

Chemical Weapons : Not listed

Convention List Schedule  
III Chemicals

## Section 16. Other information

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

Health	2
Flammability	3
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 SDSs 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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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.

### History

Date of printing : 3/12/2018

Date of issue/Date of  
revision : 3/12/2018

Date of previous issue : 6/23/2017

Version : 5.1

## Section 16. Other information

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

**References** : Not available.

✔ 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.