

# Franklin International

## Safety Data Sheet

### Titebond Fast Set Polyurethane Construction Adhesive

#### Section 1. Identification

<b>GHS product identifier</b>	: Titebond Fast Set Polyurethane Construction Adhesive
<b>Physical state</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>e-mail address of person responsible for this SDS</b>	: SDS@FranklinInternational.com
<b>Reference number</b>	: 3217
<b>Product code</b>	: 4222
<b>Date of revision</b>	: 3/25/2025
<b>Safety Data Sheets are available online at</b>	: www.FranklinInternational.com
<b>Chemtrec (24 Hour)</b>	: (800) 424 - 9300
<b>Chemtrec International</b>	: +1 703-741-5970
<b>Chemical family</b>	: Adhesive.

#### Relevant identified uses of the substance or mixture and uses advised against

##### Identified uses

Not applicable.

##### Uses advised against

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>	: ACUTE TOXICITY (inhalation) - Category 4 RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1B TOXIC TO REPRODUCTION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### GHS label elements

##### Hazard pictograms



##### Signal word

: Danger

## Section 2. Hazards identification

- Hazard statements** : May cause an allergic skin reaction.  
Harmful if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
May damage fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure. (inhalation)
- Precautionary statements**
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory protection. Use only outdoors or in a well-ventilated area. Do not breathe vapor.
- Response** : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse.
- Storage** : Store locked up. Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

Ingredient name	%	Identifiers
methylenediphenyl diisocyanate	≤3	CAS: 26447-40-5
4,4'-methylenediphenyl diisocyanate	≤3	CAS: 101-68-8
Dibutyltin dilaurate	≤1	CAS: 77-58-7

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 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of

## Section 4. First aid measures

- any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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. 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** : This product may irritate eyes upon contact.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

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

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides
- 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.
- 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. 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).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- 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. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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.

## Section 7. Handling and storage

- 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** : Store between the following temperatures: -4.5061 to 40.556°C (23.9 to 105°F). Precautions should be taken to minimize exposure to atmospheric humidity or water. CO<sub>2</sub> will be formed, which, in closed containers, could result in pressurization. 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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
methylenediphenyl diisocyanate 4,4'-methylenediphenyl diisocyanate	None. <b>NIOSH REL (United States, 10/2020)</b> TWA 10 hours: 0.05 mg/m <sup>3</sup> . TWA 10 hours: 0.005 ppm. CEIL 10 minutes: 0.2 mg/m <sup>3</sup> . CEIL 10 minutes: 0.02 ppm. <b>CAL OSHA PEL (United States, 5/2018)</b> TWA 8 hours: 0.051 mg/m <sup>3</sup> . TWA 8 hours: 0.005 ppm. <b>OSHA PEL (United States, 5/2018)</b> CEIL: 0.02 ppm. CEIL: 0.2 mg/m <sup>3</sup> . <b>OSHA PEL 1989 (United States, 3/1989)</b> CEIL: 0.02 ppm. CEIL: 0.2 mg/m <sup>3</sup> . <b>ACGIH TLV (United States, 1/2024)</b> TWA 8 hours: 0.005 ppm.
Dibutyltin dilaurate	<b>NIOSH REL (United States, 10/2020) [tin organic compounds]</b> Absorbed through skin. TWA 10 hours: 0.1 mg/m <sup>3</sup> (as Sn). <b>CAL OSHA PEL (United States, 5/2018) [tin, organic compounds]</b> Absorbed through skin. STEL 15 minutes: 0.2 mg/m <sup>3</sup> (as Sn). TWA 8 hours: 0.1 mg/m <sup>3</sup> (as Sn). <b>OSHA PEL (United States, 5/2018) [Tin, organic compounds]</b> TWA 8 hours: 0.1 mg/m <sup>3</sup> (as Sn). <b>OSHA PEL 1989 (United States, 3/1989) [Tin, organic compounds (as Sn)]</b> Absorbed through skin. TWA 8 hours: 0.1 mg/m <sup>3</sup> (measured as Sn). Form: Organic. <b>ACGIH TLV (United States, 1/2024) [Tin, organic compounds]</b> A4. Absorbed through skin.

## Section 8. Exposure controls/personal protection

TWA 8 hours: 0.1 mg/m<sup>3</sup> (as Sn).  
STEL 15 minutes: 0.2 mg/m<sup>3</sup> (as Sn).

### Biological exposure indices

No exposure indices known.

**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.

**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. Contaminated work clothing should not be allowed out of the workplace. 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: safety glasses with side-shields.

### 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. Wear protective gloves: Nitrile gloves.

**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.

**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** : If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

**Physical state** : Liquid. [Paste.]

**Color** : Brown.

**Odor** : Faint odor.

**Odor threshold** : Not available.

## Section 9. Physical and chemical properties

<b>pH</b>	: Not applicable.
<b>Melting point/freezing point</b>	: Not available.
<b>Boiling point or initial boiling point and boiling range</b>	: Not applicable.
<b>Flash point</b>	: Closed cup: >95°C (>203°F) [Setaflash]
<b>Evaporation rate</b>	: <1 (butyl acetate = 1)
<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: Not available.
<b>VOC (less water, less exempt solvents)</b>	: 20 g/l
<b>Vapor pressure</b>	:

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Distillates (petroleum), hydrotreated light	0.22502 to 0.45004	0.03 to 0.06				

<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: 1.32
<b>Solubility(ies)</b>	:

Media	Result
cold water	Not soluble
hot water	Not soluble

<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	:

Ingredient name	°C	°F	Method
Distillates (petroleum), hydrotreated light	>220	>428	

<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: water amines
<b>Hazardous decomposition products</b>	: 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

4,4'-methylenediphenyl diisocyanate

Dibutyltin dilaurate

##### Result

##### Rat - Oral - LD50

9200 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Changes in Chemistry or Temperature - Body temperature decrease

##### Rat - Oral - LD50

175 mg/kg

**Conclusion/Summary [Product]** : Not available.

#### Skin corrosion/irritation

##### Product/ingredient name

Dibutyltin dilaurate

##### Result

##### Rabbit - Skin - Severe irritant

Amount/concentration applied: 500 mg

**Conclusion/Summary [Product]** : May cause skin irritation. Contains isocyanates. May be harmful if absorbed through skin.

#### Serious eye damage/eye irritation

##### Product/ingredient name

4,4'-methylenediphenyl diisocyanate

Dibutyltin dilaurate

##### Result

##### Rabbit - Eyes - Moderate irritant

Amount/concentration applied: 100 mg

##### Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

**Conclusion/Summary [Product]** : This product may irritate eyes upon contact.

#### Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : May cause respiratory irritation.

#### Respiratory or skin sensitization

Not available.

#### Skin

**Conclusion/Summary [Product]** : Contains isocyanates. May cause sensitization by skin contact. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

##### Ingredient name

4,4'-methylenediphenyl diisocyanate  
4,4'-methylenediphenyl diisocyanate

##### Conclusion/Summary

May cause sensitization by skin contact.  
May cause sensitization by skin contact.

#### Respiratory

**Conclusion/Summary [Product]** : Contains isocyanates. May cause sensitization by inhalation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

##### Ingredient name

4,4'-methylenediphenyl diisocyanate  
4,4'-methylenediphenyl diisocyanate

##### Conclusion/Summary

May cause sensitization by inhalation.  
May cause sensitization by inhalation.

#### Germ cell mutagenicity

Not available.



## Section 11. Toxicological information

**Conclusion/Summary [Product]** : Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
4,4'-methylenediphenyl diisocyanate	-	3	-

### Reproductive toxicity

Not available.

**Conclusion/Summary [Product]** : Not available.

### Specific target organ toxicity (single exposure)

#### **Product/ingredient name**

#### **Result**

Titebond Fast Set Polyurethane Construction Adhesive  
methylenediphenyl diisocyanate

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3

4,4'-methylenediphenyl diisocyanate

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3

### Specific target organ toxicity (repeated exposure)

#### **Product/ingredient name**

#### **Result**

Titebond Fast Set Polyurethane Construction Adhesive  
methylenediphenyl diisocyanate

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 2

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

4,4'-methylenediphenyl diisocyanate

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Dibutyltin dilaurate

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory system) - Category 1

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

### Potential acute health effects

**Eye contact** : This product may irritate eyes upon contact.

**Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin contact** : May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

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

**Eye contact** : No specific data.

## Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### 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.

### Potential chronic health effects

#### Result

Not available.

#### Result

Not available.

**Conclusion/Summary [Product]** : Contains isocyanates. May cause allergic reactions in certain individuals. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**General** : May cause damage to organs through prolonged or repeated exposure if inhaled. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : May damage fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Fast Set DEV	N/A	N/A	N/A	11	N/A
methylenediphenyl diisocyanate	N/A	N/A	N/A	N/A	1.5
4,4'-methylenediphenyl diisocyanate	9200	N/A	N/A	N/A	1.5
Dibutyltin dilaurate	175	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

#### Product/ingredient name

Dibutyltin dilaurate

#### Result

##### Chronic - EC10 - Fresh water

Algae - Green algae - *Desmodesmus subspicatus*

>2 mg/l [96 hours]

Effect: Histology

##### IC50

OECD [Alga, Growth Inhibition Test]

Algae

>3 mg/l [72 hours]

**Conclusion/Summary [Product]** : Not available.

### Persistence and degradability

#### Product/ingredient name

Dibutyltin dilaurate

#### Result

OECD [Ready Biodegradability - Manometric Respirometry Test]  
23% [28 days]

**Conclusion/Summary [Product]** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dibutyltin dilaurate	-	-	Inherent

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
methylenediphenyl diisocyanate	4.51	200	Low
4,4'-methylenediphenyl diisocyanate	4.51	200	Low
Dibutyltin dilaurate	4.44	2.91	Low

### Mobility in soil

**Soil/Water partition coefficient** : Not available.

### 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

## Section 13. Disposal considerations

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.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-	-	-	-
<b>Transport hazard class(es)</b>	-	-	-	-	-	-
<b>Packing group</b>	-	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.	No.

## Section 15. Regulatory information

### U.S. Federal regulations

#### SARA 302/304

#### Composition/information on ingredients

No products were found.

#### SARA 304 RQ

: Not applicable.

#### SARA 311/312

#### Classification

: ACUTE TOXICITY (inhalation) - Category 4  
 RESPIRATORY SENSITIZATION - Category 1  
 SKIN SENSITIZATION - Category 1B  
 TOXIC TO REPRODUCTION - Category 1  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### Composition/information on ingredients

<b>Name</b>	<b>%</b>	<b>Classification</b>
<input checked="" type="checkbox"/> methylenediphenyl diisocyanate	≤3	ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

## Section 15. Regulatory information

4,4'-methylenediphenyl diisocyanate	≤3	ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 FLAMMABLE LIQUIDS - Category 3
Distillates (petroleum), hydrotreated light	≤3	
Dibutyltin dilaurate	≤1	ACUTE TOXICITY (oral) - Category 3 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	4,4'-methylenediphenyl diisocyanate	101-68-8	≤3
<b>Supplier notification</b>	4,4'-methylenediphenyl diisocyanate	101-68-8	≤3

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: METHYLENE BISPHENYL ISOCYANATE
- New York** : The following components are listed: Methylene diphenyl diisocyanate
- New Jersey** : The following components are listed: DIISOCYANATES; METHYLENE BISPHENYL ISOCYANATE
- Pennsylvania** : The following components are listed: BENZENE, 1,1'-METHYLENEBIS[4-ISOCYANATO-

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

- China** : All components are listed or exempted.
- United States TSCA 8(b) inventory** : Not determined.

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 4	Expert judgment
RESPIRATORY SENSITIZATION - Category 1	Expert judgment
SKIN SENSITIZATION - Category 1B	Expert judgment
TOXIC TO REPRODUCTION - Category 1	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Expert judgment

### History

**Date of printing** : 3/25/2025

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**Version** : 2.1

**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.