

# Franklin International

## Safety Data Sheet

### Titebond X-Treme Fire Block Straw Foam Aerosol

#### Section 1. Identification

<b>GHS product identifier</b>	: Titebond X-Treme Fire Block Straw Foam Aerosol
<b>Physical state</b>	: Aerosol.
<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>Product code</b>	: 8541
<b>Date of revision</b>	: 10/25/2018
<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

#### Relevant identified uses of the substance or mixture and 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>	: <b>FLAMMABLE AEROSOLS</b> - Category 1 GASES UNDER PRESSURE - Compressed gas ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Effects on or via lactation SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### GHS label elements

<b>Hazard pictograms</b>	: 
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<b>Signal word</b>	: Danger
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## Section 2. Hazards identification

- Hazard statements** : **F** Extremely flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 Harmful if inhaled.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause respiratory irritation.  
 May cause harm to breast-fed children.  
 May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), lungs, skin) (dermal, inhalation)
- Precautionary statements**
- Prevention** : **P** Obtain special instructions before use. Wear protective gloves. Wear eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Avoid contact during pregnancy or while nursing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
- Response** : **F** 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. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or 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 advice or attention.
- Storage** : **S** Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. 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

Ingredient name	%	CAS number
<b>F</b> 4,4'-methylenediphenyl diisocyanate	≤10	101-68-8
Isocyanic acid, polymethylenepolyphenylene ester	≤10	9016-87-9

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.

## Section 4. First aid measures

- 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 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. 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 following exposure or if feeling unwell. 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 serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- 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

## Section 4. First aid measures

### 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** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

**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. 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.

**Remark** : CONTENTS UNDER PRESSURE. May explode when heated.

## 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. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. 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).

### Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

- 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.
- 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). 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. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid contact during pregnancy or while nursing. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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. Empty containers retain product residue and can be hazardous.
- 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: 18 to 27°C (64.4 to 80.6°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. 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
4,4'-methylenediphenyl diisocyanate	<p><b>ACGIH TLV (United States, 3/2020).</b> TWA: 0.005 ppm 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> CEIL: 0.02 ppm CEIL: 0.2 mg/m<sup>3</sup></p> <p><b>NIOSH REL (United States, 10/2016).</b> TWA: 0.05 mg/m<sup>3</sup> 10 hours. TWA: 0.005 ppm 10 hours. CEIL: 0.2 mg/m<sup>3</sup> 10 minutes. CEIL: 0.02 ppm 10 minutes.</p> <p><b>OSHA PEL (United States, 5/2018).</b></p>

## Section 8. Exposure controls/personal protection

Isocyanic acid, polymethylenepolyphenylene ester	CEIL: 0.02 ppm CEIL: 0.2 mg/m <sup>3</sup> None.
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- 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. 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: 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. 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. 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. [Aerosol.]
- Color** : Orange.
- Odor** : Hydrocarbon. [Slight]
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.

## Section 9. Physical and chemical properties

<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: Closed cup: -68.9°C (-92°F) [Tagliabue.Closed cup ]
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. CONTENTS UNDER PRESSURE. May explode when heated.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>VOC (less water, less exempt solvents)</b>	: 165 g/l  Not available.
<b>Vapor pressure</b>	: 344.9 kPa (2587 mm Hg) [room temperature]
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1.1
<b>Solubility</b>	: Insoluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Aerosol product</b>	
<b>Type of aerosol</b>	: Foam
<b>Heat of combustion</b>	: 7.475 kJ/g

## 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>	: Avoid all possible sources of ignition (spark or flame).
<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	Result	Species	Dose	Exposure
4,4'-methylenediphenyl diisocyanate Isocyanic acid, polymethylenepolyphenylene ester	LD50 Oral	Rat	9200 mg/kg	-
	LC50 Inhalation Vapor	Rat	490 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>9400 mg/kg	-
	LD50 Oral	Rat	49 g/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
4,4'-methylenediphenyl diisocyanate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
Isocyanic acid, polymethylenepolyphenylene ester	Eyes - Mild irritant	Rabbit	-	100 mg	-

### Conclusion/Summary

- Skin** : Causes skin irritation.  
**Eyes** : Severely irritating to eyes.

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
4,4'-methylenediphenyl diisocyanate	-	3	-
Isocyanic acid, polymethylenepolyphenylene ester	-	3	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Titebond X-Treme Fire Block Straw Foam Aerosol	Category 3	-	Respiratory tract irritation
4,4'-methylenediphenyl diisocyanate	Category 3	-	Respiratory tract irritation
Isocyanic acid, polymethylenepolyphenylene ester	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Titebond X-Treme Fire Block Straw Foam Aerosol	Category 2	dermal, inhalation	central nervous system (CNS), lungs, skin
4,4'-methylenediphenyl diisocyanate	Category 2	-	-
Isocyanic acid, polymethylenepolyphenylene ester	Category 2	inhalation	respiratory system

### Aspiration hazard

Not available.



## Section 11. Toxicological information

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. 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** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- 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

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure if inhaled or in contact with skin. 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.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : May cause harm to breast-fed children.
- Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

## Section 11. Toxicological information

### Acute toxicity estimates

Route	ATE value
Inhalation (vapors)	11 mg/l

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
4,4'-methylenediphenyl diisocyanate	4.51	200	low

### Mobility in soil







Soil/water partition coefficient (K<sub>oc</sub>) : 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 when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1950	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS, flammable	AEROSOLS, flammable	AEROSOLS, flammable	AEROSOLS, flammable	AEROSOLS, flammable	AEROSOLS, flammable
Transport hazard class(es)	2.1 	2.1 	2.1 	2 	2.1 	2.1 
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.

### Additional information

DOT Classification : **Remarks** Limited quantity

## Section 14. Transport information

<b>TDG Classification</b>	: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). <b>Remarks</b> Limited quantity
<b>Mexico Classification</b>	: <b>Remarks</b> Limited quantity
<b>ADR/RID</b>	: <b>Tunnel code</b> (D) <b>Remarks</b> Limited quantity
<b>IMDG</b>	: <b>Remarks</b> Limited quantity

## 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** :  FLAMMABLE AEROSOLS - Category 1  
 GASES UNDER PRESSURE - Compressed gas  
 ACUTE TOXICITY (inhalation) - Category 4  
 SKIN IRRITATION - Category 2  
 EYE IRRITATION - Category 2A  
 RESPIRATORY SENSITIZATION - Category 1  
 SKIN SENSITIZATION - Category 1  
 TOXIC TO REPRODUCTION - Effects on or via lactation  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

##### Composition/information on ingredients

Name	%	Classification
4,4'-methylenediphenyl diisocyanate	≤10	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
Isocyanic acid, polymethylenepolyphenylene ester	≤10	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
Isobutane	≤10	FLAMMABLE GASES - Category 1

## Section 15. Regulatory information

dimethyl ether	≤10	GASES UNDER PRESSURE - Compressed gas FLAMMABLE GASES - Category 1
propane	≤5	GASES UNDER PRESSURE - Liquefied gas FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	4,4'-methylenediphenyl diisocyanate	101-68-8	≤10
	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	≤10
<b>Supplier notification</b>	4,4'-methylenediphenyl diisocyanate	101-68-8	≤10
	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	≤10

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; DIPHENYLMETHANE DIISOCYANATE; MDI; ISOBUTANE; METHYL ETHER; DIMETHYL ETHER; PROPANE

#### New York

: The following components are listed: Methylene diphenyl diisocyanate

#### New Jersey

: The following components are listed: POLYCHLORINATED ALKANES; ALKANES, C10-12, CHLORO; METHYLENE BISPHENYL ISOCYANATE; BENZENE, 1,1'-METHYLENEBIS[4-ISOCYANATO-]; METHYLENE DIPHENYL DIISOCYANATE (POLYMERIC); ISOCYANIC ACID, POLYMETHYLENAPOLYPHENYLENE ESTER; Isobutane; PROPANE, 2-METHYL-; DIMETHYL ETHER; METHANE, OXYBIS-; PROPANE

#### Pennsylvania

: The following components are listed: BENZENE, 1,1'-METHYLENEBIS [4-ISOCYANATO-; PROPANE, 2-METHYL-; METHANE, OXYBIS-; PROPANE

#### 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

: All components are active or exempted.

## Section 16. Other information

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

Health	*	4
Flammability		3
Physical hazards		3

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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### 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.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	Expert judgment
GASES UNDER PRESSURE - Compressed gas	Expert judgment
ACUTE TOXICITY (inhalation) - Category 4	On basis of test data
SKIN IRRITATION - Category 2	Expert judgment
EYE IRRITATION - Category 2A	Expert judgment
RESPIRATORY SENSITIZATION - Category 1	Expert judgment
SKIN SENSITIZATION - Category 1	Expert judgment
TOXIC TO REPRODUCTION - Effects on or via lactation	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

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## 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.