



## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

<b>Product name</b>	<b>1100 FS Product Series</b>
<b>Product name(s) covered</b>	See Section 16 for Product Names Covered.
<b>MSDS name</b>	1100 FS Product Series - Various Colors
<b>CAS number</b>	Mixture
<b>Generic description</b>	Polyurethane Sealant/Adhesive CARB Compliant
<b>Manufacturer</b>	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
<b>24 hour emergency assistance</b>	Telephone: 1-800-227-0332
<b>General assistance</b>	Telephone: 1-978-777-0100
<b>MSDS assistance</b>	Telephone: 1-414-607-1347

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous component(s)	CAS #	Percent
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5
Ethyl benzene	100-41-4	0.5 - 1.5
Methylene Diphenyl Isocyanate (MDI)	101-68-8	0.1 - 1
Methyl alcohol	67-56-1	< 0.15
<b>Composition comments</b>	Methyl alcohol can be formed through hydrolysis and be released during the curing process.	

### 3. HAZARDS IDENTIFICATION

<b>Emergency overview</b>	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Methyl alcohol is formed during curing. Provide ventilation adequate to control vapor exposure within inhalation guidelines when handling. This product is irritating to the eyes and skin. Thermal decomposition/burning may produce toxic gases and fumes. Closed containers may rupture when exposed to high temperatures, or when the product has been contaminated with water. Avoid breathing hot mists and vapors. This product contains a respiratory and skin sensitizer. Causes respiratory tract irritation and may cause allergic respiratory reaction. May cause permanent respiratory damage. Product vapors are potentially irritating to skin. May cause allergic skin reaction and dermatitis.
<b>Potential health effects</b>	
<b>Skin</b>	Skin contact may cause irritation. Isocyanates may react with skin protein and moisture to cause itching, reddening, swelling, scaling or blistering. Individuals previously sensitized to this material may experience these symptoms from exposure to very small amounts of liquid or vapor.
<b>Eyes</b>	This product may cause irritation to the eyes. May cause temporary corneal injury.
<b>Inhalation</b>	This product may cause irritation to the respiratory system. Methyl alcohol is formed during curing. Use with adequate ventilation. Repeated inhalation may be harmful; lung irritation and serious central nervous system disorders may result. Inhalation of vapours in high concentration can cause narcotic effects and metabolic acidosis. Single large doses, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases.
<b>Ingestion</b>	May cause irritation and corrosive action in the mouth, throat and digestive tract. This product can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Ingestion of this product may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

<b>Target organs</b>	Central Nervous System. Kidneys and Liver. The lungs and skin may be targeted and damaged by components of this product.
<b>Signs and symptoms of overexposure</b>	Signs and symptoms of overexposure to this product include headache, irritation of upper respiratory tract, asthmatic symptoms, chest tightness, breathing difficulty, coughing, dizziness, weakness, fatigue, eye irritation, skin irritation, diarrhea. Inhalation of Methyl alcohol vapors in high concentrations may cause nausea, abdominal pain, vomiting, headache, dizziness, shortness of breathe, weakness, fatigue, leg cramps, restlessness, confusion, drunken behavior, visual disturbances, drowsiness, coma, and death. Visual effects may include blurred vision, diplopia, changes in color perception, restriction of visual fields, and complete blindness. Ingestion of moderate quantities of Methyl alcohol produces metabolic acidosis. Onset of symptoms may be delayed up to 48 hours. OSHA has established a PEL of 200 ppm, 8 hour TWA. Provide ventilation adequate to control vapor exposure within inhalation guidelines when handling.
<b>Hazard statements</b>	This product contains Methylene Diphenyl Isocyanate (MDI) which is a potential skin sensitizer and has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity. Risk to your health depends on duration and concentration of exposure.

## 4. FIRST AID MEASURES

<b>First aid</b>	
<b>Skin</b>	Remove contaminated clothing to prevent further skin exposure and dispose of properly. In situations involving considerable skin contact, place the contaminated person in a deluge shower for at least 15 minutes. For minor exposures, wash thoroughly with soap and clean water. Get medical attention if irritation persists.
<b>Eye</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention or advice.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately for a large dose exposure or if cough or other symptoms develop. Administer oxygen or artificial respiration as needed.
<b>Ingestion</b>	If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Notes to physician</b>	Treat symptomatically and supportively. Contact Bostik to determine whether any additional information is available. Eyes: Stain for evidence of corneal injury. If cornea is burned, apply antibiotic/steroid preparation as needed. Skin: This product contains a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. Inhalation: This material contains a known pulmonary sensitizer. Any individual experiencing dermal or pulmonary sensitization should be removed from exposure to any diisocyanate. May aggravate existing heart conditions, particularly those with abnormal heart rhythms. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated. This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

## 5. FIRE FIGHTING MEASURES

<b>Hazardous combustion products</b>	Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
<b>Extinguishing media</b>	Use dry chemical, carbon dioxide, or foam. Water spray (fog).
<b>Dust explosion hazard</b>	None Known
<b>Sensitivity to mechanical impact</b>	None Known
<b>Sensitivity to static discharge</b>	None Known
<b>Fire fighting equipment/instructions</b>	Firefighters should wear NFPA compliant structural fire fighting protective equipment, including a self-contained breathing apparatus, helmet, hood, boots and gloves. Avoid contact with isocyanates. During a fire, isocyanate vapors and other irritating and highly toxic gases may be produced.
<b>Flash point</b>	160 °F (71.1 °C)

## 6. ACCIDENTAL RELEASE MEASURES

<b>Emergency action</b>	Appropriate safety measures and protective equipment should be used. See Section 8. Do not discharge to lakes, streams, ponds, or sewers. Dispose of in compliance with local, state, and federal regulations.
<b>Spill or leak procedure</b>	Scrape up paste and place in steel drums that are in good condition. Thoroughly clean area where spill occurred.
<b>Containment</b>	Isolate spill area. Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams.
<b>Reporting</b>	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

## 7. HANDLING & STORAGE

<b>Handling</b>	Wash hands thoroughly after handling, especially before eating, drinking, smoking, and using restroom facilities. Wash contaminated goggles, face shields, and gloves. Professionally launder contaminated clothing before re-use. Do not breathe vapors, mists or dusts. Do not breathe fumes generated when the material is overheated or burned. Use adequate ventilation. Wear respiratory protection if the material is heated, sprayed, used in a confined space or if exposure limit is exceeded. This product can produce asthmatic sensitization. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must avoid fumes from this product. Wear appropriate protective equipment to avoid contact with skin and eyes.
<b>Storage</b>	Store in a cool, dry, well-ventilated area away from heat, ignition sources and direct sunlight. Water contamination should be avoided. Cool location should be 60-80 degrees F or 15-30 degrees C.
<b>Empty container precaution</b>	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering controls</b>	Use local exhaust or general ventilation where the potential exists to exceed the PEL or TLV exposure limits. Methyl alcohol is formed during curing. Methyl alcohol vapors are toxic and flammable so special ventilation may be needed.
<b>Eye protection</b>	Wear goggles or safety glasses with side shields.
<b>Skin and body protection</b>	Wear appropriate clothing to minimize skin contact with this product.
<b>Respiratory protection</b>	Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.

### Exposure limits

#### ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Ethyl benzene	100-41-4	<u>100 ppm TWA</u>
Methyl alcohol	67-56-1	<u>200 ppm TWA</u>
Methylene Diphenyl Isocyanate (MDI)	101-68-8	<u>0.005 ppm TWA</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>100 ppm TWA</u>

#### NIOSH - Pocket Guide - TWAs

Ethyl benzene	100-41-4	<u>100 ppm TWA; 435 mg/m3 TWA</u>
Methyl alcohol	67-56-1	<u>200 ppm TWA; 260 mg/m3 TWA</u>
Methylene Diphenyl Isocyanate (MDI)	101-68-8	<u>0.005 ppm TWA; 0.05 mg/m3 TWA</u>

#### U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

Ethyl benzene	100-41-4	<u>100 ppm TWA; 435 mg/m3 TWA</u>
Methyl alcohol	67-56-1	<u>200 ppm TWA; 260 mg/m3 TWA</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>100 ppm TWA; 435 mg/m3 TWA</u>

#### U.S. - OSHA - Vacated PELs - Ceilings

Methylene Diphenyl Isocyanate (MDI)	101-68-8	<u>0.02 ppm Ceiling; 0.2 mg/m3 Ceiling</u>
-------------------------------------	----------	--

#### U.S. - OSHA - Vacated PELs - TWAs

Ethyl benzene	100-41-4	<u>100 ppm TWA; 435 mg/m3 TWA</u>
Methyl alcohol	67-56-1	<u>200 ppm TWA; 260 mg/m3 TWA</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>100 ppm TWA; 435 mg/m3 TWA</u>

## 9. PHYSICAL & CHEMICAL PROPERTIES

<b>Target solids</b>	96 %
<b>Density</b>	1.22 g/cc

<b>Odor</b>	Solvent
<b>Color</b>	Various
<b>Physical state</b>	Paste
<b>Freeze protect</b>	No
<b>VOC (Volatile Organic Compounds)</b>	3.9 %

## 10. STABILITY & REACTIVITY

<b>Hazardous reactions/decomposition products</b>	Unknown due to the complex nature of this material. Fumes from complete or incomplete combustion may include carbon dioxide, carbon monoxide, water vapor, oxides of nitrogen and a wide variety of innocuous or toxic fumes. Additional decomposition products include oxides of nitrogen, amines, hydrogen cyanide and isocyanate-containing compounds.
<b>Hazardous polymerization</b>	Hazardous polymerization can occur with elevated temperatures or contact with water.
<b>Conditions to avoid</b>	Avoid Strong Acids. Avoid amines, strong bases, alcohols and metallic hydrides.
<b>Stability</b>	This product is stable under normal conditions but will react slightly with water to release some heat and carbon dioxide. The reaction is not violent. Carbon dioxide, carbon monoxide and in high temperature (800° F) low oxygen atmospheres such as in fire situations, hydrogen cyanide may be released.

## 11. TOXICOLOGICAL INFORMATION

**Toxicological data** If any toxicological data is available, it will be listed below:

### LD50

#### Toxicology Data - Selected LD50s and LC50s

Ethyl benzene	100-41-4	<u>Inhalation LC50 Rat: 17.2 mg/L/4H; Oral LD50 Rat: 3500 mg/kg; Dermal LD50 Rabbit: 15354 mg/kg</u>
Methyl alcohol	67-56-1	<u>Inhalation LC50 Rat: 83.2 mg/L/4H; Inhalation LC50 Rat: 64000 ppm/4H; Oral LD50 Rat: 5628 mg/kg; Dermal LD50 Rabbit: 15800 mg/kg</u>
Methylene Diphenyl Isocyanate (MDI)	101-68-8	<u>Oral LD50 Rat: 9200 mg/kg</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>Inhalation LC50 Rat: 5000 ppm/4H; Oral LD50 Rat: 4300 mg/kg; Dermal LD50 Rabbit: &gt;1700 mg/kg</u>

**Carcinogenicity** If this product contains any carcinogens, they will be noted below:

This product contains Methylene Diphenyl Isocyanate (MDI). MDI is not listed by the NTP, IARC or regulated by OSHA as a carcinogen. However, it has been shown to alter cells in certain experiments. Although inconclusive, these cellular changes are thought to indicate potential carcinogenicity.

#### IARC - Group 2B (Possibly Carcinogenic to Humans)

Ethyl benzene 100-41-4 Monograph 77 [2000]

#### U.S. - OSHA - Hazard Communication Carcinogens

Ethyl benzene 100-41-4 Present

### Local effects

Single large doses, and/or repeated exposures, may lead to sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms), causing an individual to experience adverse effects at exposure levels well below exposure limits or guidelines. Symptoms may include chest tightness, wheezing, shortness of breath, coughing or asthmatic attack, and may be delayed up to several hours. Extreme asthmatic reactions can be life threatening. Once sensitized, an individual may experience adverse symptoms upon exposure to dust, cold air or other irritants. Sensitization can last several months, years or be permanent in some cases. Chronic exposure may cause lung damage, including fibrosis and decreased lung function, which may be permanent.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological information** Organic solvents produce slight to moderate toxicity to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

**Waste disposal** Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

## 14. TRANSPORT INFORMATION

### Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## 15. REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

**Federal regulations** All components are on the U.S. EPA TSCA Inventory List.

### U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Ethyl benzene	100-41-4	<u>1000 lb final RQ; 454 kg final RQ</u>
Methyl alcohol	67-56-1	<u>5000 lb final RQ; 2270 kg final RQ</u>
Methylene Diphenyl Isocyanate (MDI)	101-68-8	<u>5000 lb final RQ; 2270 kg final RQ</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>100 lb final RQ; 45.4 kg final RQ</u>

### U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Ethyl benzene	100-41-4	<u>0.1 % de minimis concentration</u>
Methyl alcohol	67-56-1	<u>1.0 % de minimis concentration</u>
Methylene Diphenyl Isocyanate (MDI)	101-68-8	<u>1.0 % de minimis concentration (listed under Chemical Category N120, Diisocyanates)</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>1.0 % de minimis concentration</u>

### U.S. - CWA (Clean Water Act) - Hazardous Substances

Ethyl benzene	100-41-4	<u>Present</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>Present</u>

### U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification

Chlorobenzene	108-90-7	<u>Section 4, 1 % de minimus concentration</u>
Xylenes (o-, m-, p- isomers)	1330-20-7	<u>Section 4</u>

**State regulations** If this product contains any ingredients listed under California Proposition 65, they will be noted below:

### U.S. - California - Proposition 65 - Carcinogens List

Ethyl benzene	100-41-4	<u>carcinogen, initial date 6/11/04</u>
---------------	----------	---

### International regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.  
All components are included on the Canadian Domestic Substances List (DSL).

### HMIS Ratings

Health: 2\*  
Flammability: 2  
Physical hazard: 0  
Personal protection: X

### SARA 311/312 HAZARD CATEGORIES

Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

### WHMIS status

Controlled

### WHMIS labeling



### WHMIS classification

D2A - Other Toxic Effects-VERY TOXIC  
D2B - Other Toxic Effects-TOXIC

## 16. OTHER INFORMATION

<b>Product name(s) covered</b>	A19200 - 1100 FS WHITE L
	A19217 - BOST 1100FS WHITE 24/10.1
	A19221 - 1100FS WHITE S/PK 12/20.3
	A19226 - BOST 1100FS WHITE S/P 24/10.0

A25600 - 1100 FS BLACK L  
A25614 - BOST 1100FS BLACK 24/10.1  
A25617 - BOST 1100FS BLACK S/P 24/10.0  
A25620 - 1100FS BLACK S/PK 12/20.0  
A26800 - 1100 FS STONE L  
A26814 - BOST 1100 FS GRAY 12/30.0  
A26815 - BOST 1100FS GRAY 24/10.1  
A26816 - 1100FS GRAY S/PK 12/20.3  
A44400 - 1100 FS PUTTY L  
A46610 - BOST 1100FS MM BEIGE 24/10.1  
A64411 - BOST 1100FS DARK GRAY 24/10.1

**Disclaimer**

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. 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 which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

**Issue date**

08-AUG-07

**Prepared by**

Pam Larsen

**Supersedes**

08-AUG-07

**MSDS sections updated**

Other Information: Further Information