

# MATERIAL SAFETY DATA SHEET

## SECTION I - PRODUCT INFORMATION

Product: **Touch 'n Seal® U2-12, U2-22, U2-200, U2-600 A Component and B Component**

Manufacturer:

**Convenience Products  
866 Horan Drive  
Fenton, MO 63026-2416  
U.S.A.**

Emergency Telephone  
Number

**Chemtrec:**  
1-800-424 9300

Information Telephone  
Number (during regular  
business hours):

1-636-349 5333

*Revised on 9/1/05*

*Prepared by Jay ZHANG*

*Approved by Joe Lott*

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

### A Component

CHEMICAL NAME	CAS NO.	OSHA PEL	ACGIH TLV	PERCENTAGE
Polymeric Diphenylmethane Diisocyanate (MDI)	9016-87-9	NE*	NE*	40-55
4,4-Diphenylmethane Diisocyanate	101-68-8	0.02ppm CEIL	0.005ppm TWA	40-55
Chlorodifluoromethane (HCFC-22)	75-45-6	1,000ppm TWA	1,000ppm TWA	6 - 18

### B Component

CHEMICAL NAME	CAS NO.	OSHA PEL	ACGIH TLV	PERCENTAGE
Polyol Blend	Proprietary Mixture NE*	NE*	NE*	35-75
Flame Retardant	Proprietary Mixture NE*	NE*	NE*	3- 20
Catalyst	Proprietary Mixture NE*	NE*	NE*	< 1
Chlorodifluoromethane (HCFC-22)	75-45-6	1,000ppm TWA	1,000ppm TWA	14 - 33

\*Not established

*None of the ingredients in both A and B component is listed by IARC, NTP, OSHA, or ACGIH as a carcinogenic substance.*

Hazard Rating: HMIS	<b>A Component</b>	<b>Health 2</b>	<b>Flammability 1</b>	<b>Reactivity 1</b>
	<b>B Component</b>	<b>Health 1</b>	<b>Flammability 1</b>	<b>Reactivity 0</b>

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

	A Component		B Component	
Boiling Point	HCFC-22 MDI	-41.4°F at 1 ATM 392°F at 5 mm Hg	HCFC-22 Polyol Blend	-41.4°F at 1 ATM NE*
Vapor Pressure	HCFC-22 MDI	136 psia at 70°F 0.00016mmHg@68°F	HCFC-22 Polyol Blend	136 psia at 70°F NE*
Vapor Density (AIR = 1)	HCFC-22	2.98 at 1 ATM	HCFC-22	2.98 at 1 ATM
Specific Gravity (H <sub>2</sub> O = 1)	HCFC-22 MDI	1.17 at 86°F 1.2	HCFC-22 Polyol Blend	1.17 at 86°F 1.1
Flash Point	HCFC-22 MDI	None > 400°F closed cup	HCFC-22 Polyol Blend	None NE*
Solubility in Water	Insoluble		Soluble	
Appearance and Odor	Dark brown color with earthy, musty odor		Clear, off yellow viscous liquid with slight odor	

\*Not established

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

#### Extinguishing Media

U2 units in boxes: Water fog, foam, CO<sub>2</sub>, or dry chemical

Cured foam: Water fog, foam, CO<sub>2</sub>, or dry chemical

#### Fire Fighting Procedures

U2 units in boxes: Keep containers cool. Wear self-contained breathing apparatus and turnout gear.

Hazardous decomposition products include CO, CO<sub>2</sub>, oxides of nitrogen, and traces of HCN, HF, HCl, Tin Oxide, Cl, PO & Silicon Dioxide.

Cured foam: Wear self-contained breathing apparatus. Hazardous decomposition products include CO, CO<sub>2</sub>, oxides of nitrogen, and traces of HCN, HF, HCl, Tin Oxide, Cl, and PO.

#### Unusual Hazards

Units in boxes: High temperatures will increase the pressure in the tanks, which may lead to rupturing.

Cured foam: This product is combustible. Do not expose to high heat, sparks, or open flame.

### SECTION V - REACTIVITY DATA

#### Stability

U2 units in boxes are considered stable under normal storage and handling conditions. Do not store above 120°F. The mixing of the "A" Component and "B" Component during use produces heat and expansion. Cured foam will slowly deteriorate when exposed to UV light.

#### Incompatibility

<b>A Component:</b>	Water, alcohols, strong bases, finely powdered metal such as aluminum, Magnesium or zinc, and strong oxidizers.
<b>B Component:</b>	Strong alkali or alkaline earth metals, finely powdered metals such as Aluminum, magnesium, or zinc, strong oxidizers, and strong acids.

#### /Hazards to Avoid:

Avoid high heat; i.e., flames, extremely hot metal surfaces, heating elements, combustion engines, etc. Contaminated A component with water may form CO<sub>2</sub>. Do not dispense only one tank at a time. Both A & B components must be used together.

### SECTION VI – TOXICOLOGICAL INFORMATION

Concentration of ingredients (section II) must be considered to determine effects of the "A" component mixture and "B" component mixture. Although these mixtures have not been tested, it is assumed that the mixture presents the same health hazards as do the ingredients present at 1% or higher level. Proper

personnel protection and adequate ventilation should be provided to avoid exceeding the exposure limits listed in section II.

**Inhalation** MDI vapors from A component or spray mist may cause irritation of the mucous membranes of the nose, throat or trachea, which may cause chest discomfort, coughing, and allergic asthma-like sensitivity. Air-borne overexposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Inhaling concentrated fluorocarbons from A component and/or B component can cause unconsciousness, drowsiness, respiratory depression, rapid heartbeat and other symptoms. Persons with preexisting heart disease may be at increased risk from exposure.

**Skin Contact:** with both A component and B component may result in localized irritation, reddening or swelling. Prolonged or repeated exposure may lead to sensitization and/or dermatitis. Uncured foam forms a quick bond with skin and hard to remove after it is cured.

**Eyes Contact:** with MDI of A component may result in eye irritation and mild corneal opacity due to adhesive character. B component may have irritating effect to eyes.

**Ingestion:** A component may cause irritation of mucous membranes in the mouth and digestive tract. B component may have slight effect of such.

## **Emergency and First Aid Procedures**

### **A component or B component material**

**Skin** - If frostbitten, warm skin slowly with water; otherwise, wash affected areas with soap and water at least 15 minutes. Remove contaminated clothing and launder before reuse. Get immediate medical attention.

**Eyes** - Immediately flush with large quantities of water for a minimum of 15 minutes. Use fingers to assure that eyelids are separated and that eye is being irrigated. Get immediate medical attention.

**Ingestion** - If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

**Inhalation** - Remove to fresh air. Get immediate medical attention.

### **Foam**

**Skin** - Remove wet foam immediately from skin with soft cloth, and then clean with acetone or nail polish remover. If irritation persists get medical attention. Dried foam is hard to remove from skin. If foam dries on skin, apply generous amounts of petroleum jelly or lanolin, leave on for one hour, wash thoroughly, and repeat process until foam is removed. Do not attempt to remove dried foam with solvents.

**Eye** - In case of eye contact, flush with water for 15 minutes. Get immediate medical attention.

**Ingestion** - In case of ingestion, get immediate medical attention.

---

## **SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

### **"A" Side**

**Spills/Leaks** - Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.

If transportation spill involved, call CHEMTREC @ 1-800-424-9300. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal. Absorb the isocyanate with sawdust or other absorbent and shovel into open top containers. Do not make pressure tight. Transport to a well-ventilated area (outside) and treat with neutralizing solution consisting of a mixture of 90% water, 3-8% ammonia and 2-7% detergent. Add about 10 parts of neutralizer per part of isocyanate with mixing. Allow standing for 48 hours letting evolved carbon dioxide escape. Decontaminate spill area using neutralizing solution and letting stand over affected areas for at least 10 minutes.

**Waste Disposal** - Dispose according to federal, state, and local regulations. - Do not discharge into waterways or sewer systems.

**Container Disposal** - Dispose according to federal, state, and local regulations.

## "B" Side

Spills/Leaks - Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up. If transportation spill involved, call CHEMTREC @ 1-800-424-9300. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal. Absorb the material with sawdust or other absorbent and shovel into containers and transport to a well-ventilated area.

Waste Disposal - Do not discharge into waterways or sewer systems. Dispose according to federal, state, and local regulations.

Container Disposal - Dispose according to federal, state, and local regulations

**Storage:** Store in a cool, dry place. Ideal storage temperature is 60°F - 80°F. Storage above 90°F will shorten the shelf life. Since the containers are pressurized, do not store above 120°F (49°C) in order to avoid excessive pressure build up and possible container rupture. Protect containers from physical abuse.

---

## SECTION VIII - PERSONAL PROTECTION

---

**Respiratory Protection** Use only in well-ventilated areas. Wear NIOSH / MSHA approved, positive pressure, supplied air respirator when vapor level is exceed the guideline listed in section II in this MSDS.

**Clothing** Wear rubber butyl or nitrile rubber gloves, coveralls, long sleeve shirts, and head covering to avoid skin contact. Contaminated equipment / clothing should be cleaned after each use or disposed.

**Eye Protection** Wear face shield and goggles, or safety glasses.

**Ventilation** If ventilation is not enough to maintain P.E.L. exhaust area.

---

## SECTION IX - OTHER REGULATORY INFORMATION

---

**TSCA** – Inventory Status: all chemicals contained in this product are listed on TSCA inventory.

**SARA** - This product contains a toxic chemical that may be subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR 372).

NAME	CAS NO.	AMOUNT
Diphenylmethane Diisocyanate	101-68-8	40-55% of "A" Side
Chlorodifluoromethane (HCFC-22)	75-45-6	6-18% of "A" Side
Chlorodifluoromethane (HCFC-22)	75-45-6	14-33% of "B" Side

**CERCLA** - Reportable Quantity - yes ...(40CFR 302.4).....(5000 lb. of Methylene bisphenyl isocyanate)

**RCRA Hazardous Waste** - No

**DOT Proper Shipping Name**

**U2-12 & U2-22** Consumer Commodity ORM-D

**U2-200 & U2-600** Compressed gas, NOS (Chlorodifluoromethane, Nitrogen)

**Diphenylmethane Diisocyanate (cas# 101-68-8) is cited on certain state lists as follow:**

NJ2=New Jersey environmental hazardous substance (present at greater than or equal to 1.0%)

NJ3=New Jersey workplace hazardous substance (present at greater than or equal to 1.0%)

PA1=Pennsylvania hazardous substance (present at greater than or equal to 1.0%)

PA3=New Jersey environmental hazardous substance (present at greater than or equal to 1.0%)

---

*The above information is accurate to the best of our knowledge. However, since safety standards, data, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, Convenience Products makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.*

# MATERIAL SAFETY DATA SHEET

## SECTION I - PRODUCT INFORMATION

Product: **Touch 'n Seal® U2-12, U2-22, U2-200, U2-600 A Component and B Component**

Manufacturer:

**Convenience Products  
866 Horan Drive  
Fenton, MO 63026-2416  
U.S.A.**

Emergency Telephone  
Number

**Chemtrec:**  
1-800-424 9300

Information Telephone  
Number (during regular  
business hours):

1-636-349 5333

*Revised on 9/1/05*

*Prepared by Jay ZHANG*

*Approved by Joe Lott*

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

### A Component

CHEMICAL NAME	CAS NO.	OSHA PEL	ACGIH TLV	PERCENTAGE
Polymeric Diphenylmethane Diisocyanate (MDI)	9016-87-9	NE*	NE*	40-55
4,4-Diphenylmethane Diisocyanate	101-68-8	0.02ppm CEIL	0.005ppm TWA	40-55
Chlorodifluoromethane (HCFC-22)	75-45-6	1,000ppm TWA	1,000ppm TWA	6 - 18

### B Component

CHEMICAL NAME	CAS NO.	OSHA PEL	ACGIH TLV	PERCENTAGE
Polyol Blend	Proprietary Mixture NE*	NE*	NE*	35-75
Flame Retardant	Proprietary Mixture NE*	NE*	NE*	3- 20
Catalyst	Proprietary Mixture NE*	NE*	NE*	< 1
Chlorodifluoromethane (HCFC-22)	75-45-6	1,000ppm TWA	1,000ppm TWA	14 - 33

\*Not established

*None of the ingredients in both A and B component is listed by IARC, NTP, OSHA, or ACGIH as a carcinogenic substance.*

Hazard Rating: HMIS	<b>A Component</b>	<b>Health 2</b>	<b>Flammability 1</b>	<b>Reactivity 1</b>
	<b>B Component</b>	<b>Health 1</b>	<b>Flammability 1</b>	<b>Reactivity 0</b>

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

	A Component		B Component	
Boiling Point	HCFC-22 MDI	-41.4°F at 1 ATM 392°F at 5 mm Hg	HCFC-22 Polyol Blend	-41.4°F at 1 ATM NE*
Vapor Pressure	HCFC-22 MDI	136 psia at 70°F 0.00016mmHg@68°F	HCFC-22 Polyol Blend	136 psia at 70°F NE*
Vapor Density (AIR = 1)	HCFC-22	2.98 at 1 ATM	HCFC-22	2.98 at 1 ATM
Specific Gravity (H <sub>2</sub> O = 1)	HCFC-22 MDI	1.17 at 86°F 1.2	HCFC-22 Polyol Blend	1.17 at 86°F 1.1
Flash Point	HCFC-22 MDI	None > 400°F closed cup	HCFC-22 Polyol Blend	None NE*
Solubility in Water	Insoluble		Soluble	
Appearance and Odor	Dark brown color with earthy, musty odor		Clear, off yellow viscous liquid with slight odor	

\*Not established

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

#### Extinguishing Media

U2 units in boxes: Water fog, foam, CO<sub>2</sub>, or dry chemical

Cured foam: Water fog, foam, CO<sub>2</sub>, or dry chemical

#### Fire Fighting Procedures

U2 units in boxes: Keep containers cool. Wear self-contained breathing apparatus and turnout gear.

Hazardous decomposition products include CO, CO<sub>2</sub>, oxides of nitrogen, and traces of HCN, HF, HCl, Tin Oxide, Cl, PO & Silicon Dioxide.

Cured foam: Wear self-contained breathing apparatus. Hazardous decomposition products include CO, CO<sub>2</sub>, oxides of nitrogen, and traces of HCN, HF, HCl, Tin Oxide, Cl, and PO.

#### Unusual Hazards

Units in boxes: High temperatures will increase the pressure in the tanks, which may lead to rupturing.

Cured foam: This product is combustible. Do not expose to high heat, sparks, or open flame.

### SECTION V - REACTIVITY DATA

#### Stability

U2 units in boxes are considered stable under normal storage and handling conditions. Do not store above 120°F. The mixing of the "A" Component and "B" Component during use produces heat and expansion. Cured foam will slowly deteriorate when exposed to UV light.

#### Incompatibility

<b>A Component:</b>	Water, alcohols, strong bases, finely powdered metal such as aluminum, Magnesium or zinc, and strong oxidizers.
<b>B Component:</b>	Strong alkali or alkaline earth metals, finely powdered metals such as Aluminum, magnesium, or zinc, strong oxidizers, and strong acids.

#### /Hazards to Avoid:

Avoid high heat; i.e., flames, extremely hot metal surfaces, heating elements, combustion engines, etc. Contaminated A component with water may form CO<sub>2</sub>. Do not dispense only one tank at a time. Both A & B components must be used together.

### SECTION VI – TOXICOLOGICAL INFORMATION

Concentration of ingredients (section II) must be considered to determine effects of the "A" component mixture and "B" component mixture. Although these mixtures have not been tested, it is assumed that the mixture presents the same health hazards as do the ingredients present at 1% or higher level. Proper

personnel protection and adequate ventilation should be provided to avoid exceeding the exposure limits listed in section II.

**Inhalation** MDI vapors from A component or spray mist may cause irritation of the mucous membranes of the nose, throat or trachea, which may cause chest discomfort, coughing, and allergic asthma-like sensitivity. Air-borne overexposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Inhaling concentrated fluorocarbons from A component and/or B component can cause unconsciousness, drowsiness, respiratory depression, rapid heartbeat and other symptoms. Persons with preexisting heart disease may be at increased risk from exposure.

**Skin Contact:** with both A component and B component may result in localized irritation, reddening or swelling. Prolonged or repeated exposure may lead to sensitization and/or dermatitis. Uncured foam forms a quick bond with skin and hard to remove after it is cured.

**Eyes Contact:** with MDI of A component may result in eye irritation and mild corneal opacity due to adhesive character. B component may have irritating effect to eyes.

**Ingestion:** A component may cause irritation of mucous membranes in the mouth and digestive tract. B component may have slight effect of such.

## **Emergency and First Aid Procedures**

### **A component or B component material**

**Skin** - If frostbitten, warm skin slowly with water; otherwise, wash affected areas with soap and water at least 15 minutes. Remove contaminated clothing and launder before reuse. Get immediate medical attention.

**Eyes** - Immediately flush with large quantities of water for a minimum of 15 minutes. Use fingers to assure that eyelids are separated and that eye is being irrigated. Get immediate medical attention.

**Ingestion** - If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

**Inhalation** - Remove to fresh air. Get immediate medical attention.

### **Foam**

**Skin** - Remove wet foam immediately from skin with soft cloth, and then clean with acetone or nail polish remover. If irritation persists get medical attention. Dried foam is hard to remove from skin. If foam dries on skin, apply generous amounts of petroleum jelly or lanolin, leave on for one hour, wash thoroughly, and repeat process until foam is removed. Do not attempt to remove dried foam with solvents.

**Eye** - In case of eye contact, flush with water for 15 minutes. Get immediate medical attention.

**Ingestion** - In case of ingestion, get immediate medical attention.

---

## **SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

### **"A" Side**

**Spills/Leaks** - Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.

If transportation spill involved, call CHEMTREC @ 1-800-424-9300. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal. Absorb the isocyanate with sawdust or other absorbent and shovel into open top containers. Do not make pressure tight. Transport to a well-ventilated area (outside) and treat with neutralizing solution consisting of a mixture of 90% water, 3-8% ammonia and 2-7% detergent. Add about 10 parts of neutralizer per part of isocyanate with mixing. Allow standing for 48 hours letting evolved carbon dioxide escape. Decontaminate spill area using neutralizing solution and letting stand over affected areas for at least 10 minutes.

**Waste Disposal** - Dispose according to federal, state, and local regulations. - Do not discharge into waterways or sewer systems.

**Container Disposal** - Dispose according to federal, state, and local regulations.

## "B" Side

Spills/Leaks - Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up. If transportation spill involved, call CHEMTREC @ 1-800-424-9300. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal. Absorb the material with sawdust or other absorbent and shovel into containers and transport to a well-ventilated area.

Waste Disposal - Do not discharge into waterways or sewer systems. Dispose according to federal, state, and local regulations.

Container Disposal - Dispose according to federal, state, and local regulations

**Storage:** Store in a cool, dry place. Ideal storage temperature is 60°F - 80°F. Storage above 90°F will shorten the shelf life. Since the containers are pressurized, do not store above 120°F (49°C) in order to avoid excessive pressure build up and possible container rupture. Protect containers from physical abuse.

---

## SECTION VIII - PERSONAL PROTECTION

---

**Respiratory Protection** Use only in well-ventilated areas. Wear NIOSH / MSHA approved, positive pressure, supplied air respirator when vapor level is exceed the guideline listed in section II in this MSDS.

**Clothing** Wear rubber butyl or nitrile rubber gloves, coveralls, long sleeve shirts, and head covering to avoid skin contact. Contaminated equipment / clothing should be cleaned after each use or disposed.

**Eye Protection** Wear face shield and goggles, or safety glasses.

**Ventilation** If ventilation is not enough to maintain P.E.L. exhaust area.

---

## SECTION IX - OTHER REGULATORY INFORMATION

---

**TSCA** – Inventory Status: all chemicals contained in this product are listed on TSCA inventory.

**SARA** - This product contains a toxic chemical that may be subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR 372).

NAME	CAS NO.	AMOUNT
Diphenylmethane Diisocyanate	101-68-8	40-55% of "A" Side
Chlorodifluoromethane (HCFC-22)	75-45-6	6-18% of "A" Side
Chlorodifluoromethane (HCFC-22)	75-45-6	14-33% of "B" Side

**CERCLA** - Reportable Quantity - yes ...(40CFR 302.4).....(5000 lb. of Methylene bisphenyl isocyanate)

**RCRA Hazardous Waste** - No

**DOT Proper Shipping Name**

**U2-12 & U2-22** Consumer Commodity ORM-D

**U2-200 & U2-600** Compressed gas, NOS (Chlorodifluoromethane, Nitrogen)

**Diphenylmethane Diisocyanate (cas# 101-68-8) is cited on certain state lists as follow:**

NJ2=New Jersey environmental hazardous substance (present at greater than or equal to 1.0%)

NJ3=New Jersey workplace hazardous substance (present at greater than or equal to 1.0%)

PA1=Pennsylvania hazardous substance (present at greater than or equal to 1.0%)

PA3=New Jersey environmental hazardous substance (present at greater than or equal to 1.0%)

---

*The above information is accurate to the best of our knowledge. However, since safety standards, data, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, Convenience Products makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.*