

MATERIAL SAFETY DATA SHEET

1	PRODUCT	ROOF PAK (A Component) 1.0 Density		
2	COMPOSITION			
	<u>CHEMICAL</u>	<u>CAS#</u>	<u>CONCENTRATION</u>	<u>REGULATED</u>
	4,4-Diphenylmethane-diisocyanate (MDI)	101-68-8	40-70%	Yes
	Polymeric MDI	9016-87-9	40-70%	Yes
	Chlorodifluoromethane	75-45-6	7-13%	Yes
	(1-see regulatory section for more information) (2-different raw material sources)			
	Appearance: Dark brown, frothy liquid with a mild odor.			
3	HAZARDS IDENTIFICATION	<p style="text-align: right;">CAUTION! Contents under pressure.</p> <p>Irritancy of Product: Irritating to eyes, skin and respiratory tract. Sensitizing Properties: May cause sensitization by skin contact and inhalation. Exposure to individuals with asthma, eczema and or allergies may aggravate existing conditions. Symptoms may include: coughing, wheezing and shortness of breath.</p> <p style="text-align: right;">Routes of Entry: Eye and skin contact, inhalation, ingestion.</p>		
	HMIS: H F R PPE 2 1 0			
4	FIRST AID MEASURES	<p>EYE flush with clean, low pressure water for 15 minutes while holding eyelids open.</p> <p>SKIN remove contaminated clothing; wash skin with soap and water.</p> <p>INHALATION remove to fresh air.</p> <p>INGESTION in case of excessive ingestion, give large amount of liquids. Do not induce vomiting.</p>		
5	FIRE-FIGHTING MEASURES	<p>Flash Point: >390°F (>199°C) (estimated)</p> <p>Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water</p> <p>Special Protective Equipment: Self Contained Breathing Apparatus</p> <p>Hazardous Decomposition Products: During combustion, Carbon Monoxide and Carbon Dioxide, Nitrogen Oxides, Ammonia and trace amounts of Hydrogen Cyanide are given off.</p>		
6	ACCIDENTAL RELEASE MEASURES	<p>Provide adequate ventilation.</p> <p>Wear suitable personal protective clothing and equipment.</p> <p>Contain spill and collect using suitable absorbent material such as sawdust or vermiculite. Shovel into waste container adding decontaminate solution. (90% water, 7% ammonia and 3% detergent) Leave uncovered for 24 hours prior to disposal.</p>		
7	HANDLING AND STORAGE	<p>CAUTION! Contents under pressure.</p> <p>Avoid open flames.</p> <p>Storage temperature: <120°F (<49°C)</p> <p>Do not puncture or incinerate.</p>		
	Prepared by: M. Herosy File Name: CON-126A	Reference No. ROOF PAK (A Component) Date of Issue: 12/97		(pg.1 of 2)

MATERIAL SAFETY DATA SHEET

1	PRODUCT ROOF PAK (B Component) 1.0 Density												
2	COMPOSITION <table border="1" data-bbox="203 451 1299 535"> <thead> <tr> <th><u>CHEMICAL</u></th> <th><u>CAS#</u></th> <th><u>CONCENTRATION</u></th> <th><u>REGULATED</u></th> </tr> </thead> <tbody> <tr> <td>Polyether Polyol Blend</td> <td>Mixture_</td> <td>60-100%</td> <td>No</td> </tr> <tr> <td>Chlorodifluoromethane</td> <td>75-45-6</td> <td>10-30%</td> <td>Yes</td> </tr> </tbody> </table> <p>(1-see regulatory section for more information) (2-different raw material sources) Appearance: Brown to light yellow, frothy liquid with a mild odor.</p>	<u>CHEMICAL</u>	<u>CAS#</u>	<u>CONCENTRATION</u>	<u>REGULATED</u>	Polyether Polyol Blend	Mixture_	60-100%	No	Chlorodifluoromethane	75-45-6	10-30%	Yes
<u>CHEMICAL</u>	<u>CAS#</u>	<u>CONCENTRATION</u>	<u>REGULATED</u>										
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4	FIRST AID MEASURES EYE flush with clean, low pressure water for 15 minutes while holding eyelids open. SKIN remove contaminated clothing; wash skin with soap and water. INHALATION remove to fresh air. INGESTION in case of excessive ingestion, give large amount of liquids. Do not induce vomiting. In all cases, seek additional medical attention.												
5	FIRE-FIGHTING MEASURES Flash Point: >200°F (>93.3°C) (estimated) Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Special Protective Equipment: Self Contained Breathing Apparatus Hazardous Decomposition Products: During combustion, Carbon Dioxide and Carbon Monoxide, Nitrogen Oxides, Ammonia and trace amounts of Hydrogen Cyanide are given off.												
6	ACCIDENTAL RELEASE MEASURES Provide adequate ventilation. Wear suitable personal protective clothing and equipment. Contain spill and collect using a suitable absorbent material such as sawdust or vermiculite.												
7	HANDLING AND STORAGE CAUTION! Contents under pressure. Avoid open flames. Do not puncture or incinerate. Storage temperature: 75°F (26°C)												
8	EXPOSURE CONTROLS/PERSONAL PROTECTION EYE wear safety goggles. SKIN wear protective clothing. RESPIRATORY use only in well-ventilated areas. With insufficient ventilation, wear suitable respiratory protection.												
Prepared by: M. Herosy File Name: CON-126B	Reference No. Roof Pak (B Component) Date of Issue: 5/97 (pg. 1 of 2)												

MATERIAL SAFETY DATA SHEET

9	PHYSICAL AND CHEMICAL PROPERTIES		Vapor Pres. (21°C/70°F): 2500mmHg Specific Gravity: 1.2 VOC Content (lb/gal): 0
10	STABILITY AND REACTIVITY		Stable under normal handling and use.
11	TOXICOLOGICAL INFORMATION		No toxicological testing has been done on this mixture. CAUTION! Contents under pressure. Irritancy of Product: Irritating to eye, skin and mucous membranes. (Acute) Routes of Entry: Eye and skin contact, inhalation, ingestion.
12	ECOLOGICAL INFORMATION		Unknown
13	DISPOSAL INFORMATION		Do not puncture or incinerate. Relieve all pressure prior to disposal. Empty cylinders, once relieved of all pressure, can be disposed as non-hazardous waste. Dispose of leftover chemical by following instructions under "Accidental Release Measure".
14	TRANSPORTATION INFORMATION		Compressed Gases, N.O.S. (Nitrogen, Chlorodifluoromethane), 2.2 UN1956
15	REGULATORY INFORMATION		<u>SHORT TERM(10 mins), mg/m₃</u>
	<u>EXPOSURE LIMITS</u>	<u>TWA (8 hour), mg/m₃</u>	
	Chlorodifluoromethane	3500 (1000ppm)	
	<u>REGULATED CHEMICAL</u>	<u>APPLICABLE REGULATIONS</u>	
	Chlorodifluoromethane	SARA 311/312/313 Canada, Ma, NJ, PA	
16	OTHER INFORMATION		N/A
	Prepared by: M. Herosy	Reference No. Roof Pak (B Component)	
	File Name: CON-126B	Date of Issue: 5/97	(pg. 2 of 2)

MATERIAL SAFETY DATA SHEET

8	EXPOSURE CONTROLS/PERSONAL PROTECTION		<p>EYE wear safety goggles. SKIN wear protective clothing. RESPIRATORY use only in well-ventilated areas. With insufficient ventilation, or in situations where the potential exists for exceeding the TLV, wear Self-Contained Breathing Apparatus.</p>									
9	PHYSICAL AND CHEMICAL PROPERTIES		<p>Vapor Pres. (21°C/70°F): 2700mmHg Specific Gravity: 1.3 VOC Content (lb/gal): 0</p>									
10	STABILITY AND REACTIVITY		<p>Reacts with water. Avoid alkalies, acids, alcohol and ammonia. Reaction may be violent at elevated temperatures.</p>									
11	TOXICOLOGICAL INFORMATION		<p>Concentration of components (Sec. 2) must be considered to determine effects of this mixture. MDI: LD500d 15gm/kg (rat); ingestion</p> <p>CAUTION! Contents under pressure. Irritancy of Product: Irritating to eyes, skin and respiratory tract. Sensitizing Properties: May cause sensitization by skin contact and inhalation. Exposure to individuals with asthma, eczema and or allergies may aggravate existing conditions. Symptoms may include: coughing, wheezing and shortness of breath. Routes of Entry: Eye and skin contact, inhalation, ingestion.</p>									
12	ECOLOGICAL INFORMATION		Unknown									
13	DISPOSAL INFORMATION		<p>Do not puncture or incinerate. Relieve all pressure prior to disposal. Empty cylinders, once relieved of all pressure, can be disposed as non-hazardous waste. Dispose of leftover chemical by following instructions under "Accidental Release Measures".</p>									
14	TRANSPORTATION INFORMATION		Compressed gases, N.O.S. (Nitrogen, Chlorodifluoromethane), 2.2 UN1956									
15	REGULATORY INFORMATION		<table border="0"> <thead> <tr> <th data-bbox="206 1497 383 1518"><u>EXPOSURE LIMITS</u></th> <th data-bbox="513 1497 740 1518"><u>TWA (8 hour), mg/m³</u></th> <th data-bbox="821 1497 1130 1518"><u>SHORT TERM(10 mins), mg/m³</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="206 1528 448 1581">4,4-Diphenylmethane-diisocyanate (MDI)</td> <td data-bbox="513 1528 691 1549">0.05 (0.005ppm)</td> <td data-bbox="821 1528 1024 1549">.2 (0.02ppm) ceiling</td> </tr> <tr> <td data-bbox="206 1581 431 1602">Chlorodifluoromethane</td> <td data-bbox="513 1581 691 1602">3500 (1000ppm)</td> <td data-bbox="821 1581 862 1602">N/A</td> </tr> </tbody> </table>	<u>EXPOSURE LIMITS</u>	<u>TWA (8 hour), mg/m³</u>	<u>SHORT TERM(10 mins), mg/m³</u>	4,4-Diphenylmethane-diisocyanate (MDI)	0.05 (0.005ppm)	.2 (0.02ppm) ceiling	Chlorodifluoromethane	3500 (1000ppm)	N/A
<u>EXPOSURE LIMITS</u>	<u>TWA (8 hour), mg/m³</u>	<u>SHORT TERM(10 mins), mg/m³</u>										
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Chlorodifluoromethane	3500 (1000ppm)	N/A										
	<p><u>REGULATED CHEMICAL</u> 4,4-Diphenylmethane-diisocyanate (MDI) Chlorodifluoromethane PMDI</p>	<p><u>APPLICABLE REGULATIONS</u> SARA 311/312/313, CAA 1990 Toxic air Pollutant SARA 311/312/313 Canda, MA, NJ, PA SARA 313</p>										
16	OTHER INFORMATION		N/A									
<p>Prepared by: M. Herosy File Name: CON-126A</p>		<p>Reference No. ROOF PAK (A Component) Date of Issue: 12/97</p>										