

Business Hours: 8:00 a.m - 5:00 p.m.  
Emergency Telephone Number: 717/245-7000

MATERIAL SAFETY DATA SHEET  
CARLISLE SYNTEC INCORPORATED  
1285 RITNER HIGHWAY  
P.O. BOX 7000  
CARLISLE, PA. 17013

For Transportation Emergencies Call  
Chemtrec: 800/424-9300

MSDS Date: 2/13/98

MSDS Rev # 011

Supercedes All Previous Publications

Page 1 of 2

SECTION I

PRODUCT NAME AND SYNONYMS: LIQUISEAL® - PART B

CHEMICAL FAMILY: Aromatic Diisocyanate  
PRODUCT USE: Curative For Liqueiseal - Part A  
FORMULA: Mixture



SECTION II(A) HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	%	PEL (ppm)			SKIN DESIG- NATION	LD <sub>50</sub> OF INGREDIENT (SPECIFY SPECIES & ROUTE) (mg/kg)	LC <sub>50</sub> OF INGREDIENT (SPECIFY SPECIES) (ppm/4H)
			TWA	STEL	CEILING			
Diphenylmethane 4,4'- Diisocyanate (MDI)	101-68-8 & 026447-40-5	44.0	None	None	0.02	N/A	orl-rat: LCLo:31690	rat:178mg/m <sup>3</sup>
Diphenylmethane 4,4'- Diisocyanate (Homo-polymer)	039319-05-9	11.0	None	None	None	N/A	orl-rat:>5,000	Not Available
Terphenyls	26140-60-3	3-4	None	None	0.5	N/A	Not Available	Not Available

N/A = Not Applicable H = Hours

SECTION II(B) ADDITIONAL INGREDIENTS (>3%)

Ingredients: Hydrogenated Terphenyls - CAS # 61788-32-7

SECTION III PHYSICAL DATA

Physical State	Odor And Appearance	VOC (grams/liter)	Odor Threshold (ppm)	Vapor Pressure(mm Hg)
Liquid	Yellow oily liquid, very mild odor.	Less than 10	Not Available	0.001 @40°C
Vapor Density (AIR=1)	Evaporation Rate (nBuAc=1)	Boiling Point(°C)	Freezing Point (°C)	pH
Heavier than air.	Not Applicable	90°-93°C @5mm	>32°F	Not Applicable
Specific Gravity	Coeff Water/Oil Dist	Solubility In Water	Volatiles By Wt (%)	Corrosivity
1.093-1.105	Not Available	Reacts with water	Less than 1	No evidence

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability: Yes No X - If Yes, Under Which Conditions?

Flashpoint (°C) And Method Autoignition Temperature (°C) Lower Flammable Limit (% By Vol) Upper Flammable Limit (% By Vol)  
104°C (220°F) C.O.C. Not Determined Not Determined Not Determined

Hazardous Combustion Products: Oxides of nitrogen, traces of hydrogen cyanide, carbon monoxide, and carbon dioxide.

EXPLOSION DATA:

Sensitivity To Impact: There is no evidence to indicate that this product is sensitive to impact.

Sensitivity To Static Discharge: There is no evidence to indicate that this product is sensitive to static discharge.

Extinguishing Media: In case of fire, use dry chemical, carbon dioxide, or foam. Water may not be effective as an extinguishing agent. Water fog or spray may be used to provide a smothering effect on fire and to cool fire-exposed containers and surrounding combustibles. Do not use a solid stream of water because it can scatter and spread the fire. NOTE: Water may react vigorously with hot product.

Special Fire Fighting Procedures: Fire fighters should wear self-contained breathing apparatus and full protective clothing. Do not breathe smoke or vapors given off by burning material.

Unusual Fire And Explosion Hazards: In case of fire, evacuate all down-wind personnel. If product becomes contaminated, do not reseal containers as pressure build-up may rupture them.

SECTION V - REACTIVITY DATA

Chemical Stability: Stable

Hazardous Polymerization: May occur.

Conditions To Avoid: Contact with water, alcohols, amines, and other materials which react with diisocyanates; prolonged heating above 160°C, or storage below 5°C. Temperatures above 49°C will accelerate reaction with water.

Incompatibility (Materials To Avoid) Water, alcohols, acids, bases, metal compounds, or surface active material.

Hazardous Decomposition Products: Isocyanate vapor, carbon dioxide, carbon monoxide, nitrogen oxides, traces of hydrogen cyanide.

\*\*\* Also see MSDS for Liqueiseal®- Part A \*\*\*

===== SECTION VI - TOXICOLOGICAL PROPERTIES =====

Route Of Entry: Skin Contact X Skin Absorption X Eye Contact X Inhalation X Ingestion X

Effects Of Acute Exposure To Product: Breathlessness, chest discomfort, reduced pulmonary function, skin rash. May cause eye irritation. The manifestations of respiratory symptoms may be delayed.

Effects Of Chronic Exposure: Allergic skin sensitization may occur in some individuals. Decreased ventilatory capacity is possible.

NOTE: The manifestations of respiratory symptoms resulting from acute exposure may be delayed.

<u>Exposure Limits</u>	<u>Irritancy Of Product</u>	<u>Sensitization To Product</u>	<u>Carcinogenicity</u>
PEL ceiling 0.02ppm for MDI homopolymer.	May irritate skin, eyes, and respiratory tract.	May cause skin rash and/or asthma-like reaction.	No evidence

<u>Teratogenicity</u>	<u>Reproductive Toxicity</u>	<u>Mutagenicity</u>	<u>Synergistic Products</u>	<u>Tumorigenicity</u>
No evidence	No evidence	MDI has shown positive in some in vitro tests.	None known	No evidence

===== SECTION VII - PREVENTIVE MEASURES =====

PERSONAL PROTECTIVE EQUIPMENT:

- Gloves: Hycron® or other impermeable gloves recommended.
- Respirator: A NIOSH approved respirator if working in tightly enclosed area.
- Eye: Chemical goggles or face shield are recommended.
- Footwear: Rubber boots or industrial shoes to protect feet from contact with product.
- Clothing: Freshly laundered clothing with long sleeves and long pants.
- Other: Protective skin creams or emollients useful.

Engineering Controls (EG, Ventilation, Enclosed Process): Do not use in enclosed areas without proper ventilation. General and local exhaust ventilation must be sufficient to control airborne levels below the exposure guideline of 0.02ppm.

Leak Or Spill Procedure: Evacuate and ventilate area. Blanket with protein foam to control vapors. Soak up spillage with absorbent material. Transfer to open top containers in well ventilated area, and neutralize with a 10% mixture of Ammonium Hydroxide in water for 48 hours, allowing CO<sub>2</sub> to escape.

Waste Disposal: Neutralize as described above and dispose of in accordance with all local, state, and federal regulations.

Handling Procedures And Equipment: Avoid skin and eye contact. Avoid breathing vapor or mist.

Storage Requirements: Store above 40°F (5°C). Avoid moisture contamination. Keep container closed when not in use. KEEP OUT OF REACH OF CHILDREN.

Special Shipping Information: Not Regulated by DOT.

===== SECTION VIII - FIRST AID MEASURES =====

Specific Measures:

- Inhalation: - Remove to fresh air; give oxygen; call physician.
- Skin: - Wash with soap and water, rubbing alcohol is helpful. If rash develops, consult physician and avoid re-exposure to product.
- Ingestion: - Do not induce vomiting; call physician immediately.
- Eyes: - Flush with water for at least 15 minutes. Call physician.

===== SECTION IX - SARA SECTION 313 SUPPLIER NOTIFICATION =====

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning And Community Right-To-Know Act of 1986 and of 40 CFR 372:

DIPHENYLMETHANE-4,4'-DIISOCYANATE, CAS# 101-68-8, 35 - 40%

===== SECTION X - PREPARATION INFORMATION =====

Prepared By: Accessory Products Group

Form Doc #R6-F0038 Form Eff Date: 5/30/97 Form Rev #003  
Reason For Change: Change Document Ownership.