



**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 02/14/2002

Reviewed on 02/14/2002

**1 Identification of substance**

· **Product details**

· **Trade name:** illbruck Universal Foam Sealant

**Product Identifier:** illbruck UNIVERSAL FOAM SEALANT

**Item No:** 22692, 20235, 20236, 20237 and 20238

**Formulation No:** LP 105287, LP 105305, LP 104760, LP 104763

· **Manufacturer/Supplier:**

illbruck Sealant Systems inc.  
3800 Washington Avenue North  
Minneapolis, MN 55412

· **Information department:**

Product Information and Customer Service illbruck Sealant Systems:  
1-800-438-0684

· **Emergency information:**

Transportation Emergency: CHEMTREC 1-800-424-9300 (24 hour service)  
International Transportation Emergency: CHEMTREC (703) 527-3887

**2 Composition/Data on components**

· **Chemical characterization**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

9016-87-9	diphenylmethanediisocyanate, isomeres and homologues Xn; R 20-36/37/38-42/43	30-60%
106-97-8	butane F+; R 12	<10%
74-98-6	propane F+; R 12	<10%

**3 Hazards identification**

· **Hazard description:**



Xn Harmful  
F+ Extremely flammable

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· **Information pertaining to particular dangers for man and environment:**

R 20 Harmful by inhalation.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitization by inhalation and skin contact.

Contains isocyanates. See information supplied by the manufacturer.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C/ 122° F, i.e. electric lights. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

· **Classification system:**

The classification is in line with internationally approved calculation standards. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

· **NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 4  
Reactivity = 3

· **HMIS-ratings (scale 0 - 4)**



Health = \*2  
Fire = 4  
Reactivity = 3

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**Additional information:**

**EMERGENCY OVERVIEW**

Extremely flammable. Contents under pressure. Do not smoke while using nor use near open flame. Container may explode if heated in any manner. Eye irritant. May irritate or cause allergic skin reaction to skin. Inhalation of vapor may result in respiratory allergies including asthma.

**POTENTIAL HEALTH EFFECTS**

Irritation from contact with uncured product particularly eyes and mucous membranes. May cause skin irritation and aggravate allergic skin conditions. Persons with known isocyanate allergies should avoid any skin or respiratory contact with product ingredients.

**EYE CONTACT**

Uncured product is irritating to the eyes. Eye contact may result in moderate corneal injury and considerable redness lasting a week or more.

**SKIN CONTACT**

Frequent or prolonged contact may irritate the skin and cause dermatitis. May cause slight reddening if exposure is long or repeated.

**INGESTION**

Swallowing large amounts may cause digestive discomfort.

**INHALATION**

May cause mild respiratory irritation in uncured state.

**CHRONIC**

Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma.

**4 First aid measures**

**General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:**

Allow the victim to rest in an well ventilated area in a half-upright position. Seek immediate medical attention. Loosen tight fitting clothing. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

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- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If the chemical touches the victim's exposed skin, gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
- **After eye contact:**  
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lens. Do not use an eye ointment without seeking medical attention.
- **After swallowing:** DO NOT INDUCE VOMITING. Seek immediate medical attention.

**5 Fire fighting measures**

- **Suitable extinguishing agents:**  
Use water fog, dry chemical, foam fire extinguishing media or carbon dioxide extinguishing media. Keep containers cool. Use equipment or shielding to protect against bursting or venting of containers.
- **For safety reasons unsuitable extinguishing agents:**  
Water  
Water with full jet
- **Special hazards caused by the material, its products of combustion or resulting gases:**  
GENERAL HAZARD:  
Uncured product contains diphenylmethane-4,4'diisocyanate that can cause allergic reaction to the skin. Inhalation of the vapor may result in respiratory allergies. Propellants are extremely flammable. Pressure in container rises with heating. If container is heated, the container could burst.  
HAZARDOUS COMBUSTION PRODUCTS  
Carbon monoxide, carbon dioxide, oxides of nitrogen, short-chained carbon and nitrogen containing compounds.
- **Protective equipment:**  
Respiratory and eye protection required for fire fighting personnel. Full protective equipment and a self-contained breathing apparatus should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of SCBA may not be required.

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- **Additional information**  
Flammable Limits: lower 4% upper 8%  
Autoignition Temperature: N/A

**6 Accidental release measures**

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Additional information:**  
LAND SPILL  
Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of spill. Eliminate ignition sources. Isolate hazard area and deny entry to unauthorized or unprotected personnel.

**7 Handling and storage**

- **Handling:**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C/ 122°F, i.e. electric lights. Do not pierce or burn, even after use.  
Do not spray on a naked flame or any incandescent material.

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- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
 Observe official regulations on storing packagings with pressurized containers.  
 Store in a cool dry location in closed packing at temperatures between 41°F and 77°F.  
 Incompatible with strong caustics, amines, alkali metal compounds, alcohols and water.  
 Follow all MSDS/label warnings even after container is emptied.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
 Keep receptacle tightly sealed.  
 Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** Class according to regulation on flammable liquids: ORM-D

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:**  
 No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

<b>106-97-8 butane</b>	
ACGIH TLV	1900 mg/m <sup>3</sup> , 800 ppm
NIOSH REL	1900 mg/m <sup>3</sup> , 800 ppm
<b>74-98-6 propane</b>	
ACGIH TLV	4508 mg/m <sup>3</sup> , 2500 ppm
NIOSH REL	1800 mg/m <sup>3</sup> , 1000 ppm
OSHA PEL	1800 mg/m <sup>3</sup> , 1000 ppm
<b>9016-87-9 diphenylmethanediisocyanate, isomeres and homologues</b>	
ACGIH TLV	0.005 ppm
OSHA TLV	0.02 ppm

- **Additional information:**  
 The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.

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Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

· **Eye protection:**



Tightly sealed goggles

### 9 Physical and chemical properties

· <b>Form:</b>	Aerosol
· <b>Color:</b>	black/ green/ cream
· <b>Odor:</b>	Amine-like
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	N/A
<b>Boiling point/Boiling range:</b>	N/A
· <b>Flash point:</b>	< 0°C (< 32°F)
· <b>Ignition temperature:</b>	235°C (455°F)
· <b>Auto igniting:</b>	Product is not self-igniting.
· <b>Danger of explosion:</b>	Heating may cause an explosion.
· <b>Density:</b>	1.01

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· <b>Specific Gravity:</b>	at 20°C (68°F): .996 g/ml
· <b>Solubility in / Miscibility with Solubility in water</b>	Insoluable, reacts slowly with water or mist of water during cure, releasing traces of CO2.
· <b>pH-value:</b>	at 20°C (68°F): N/A

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Dangerous reactions**  
Reaction at high temperatures may be violent. (follow temperature storage conditions suggested in section 7)
- **Dangerous products of decomposition:**  
No dangerous decomposition products known.
- **Additional information:**  
Stable under normal storage conditions (see section 7 in the MSDS), installed foam is stable. Avoid water contamination, avoid alcohols, strong bases with metal compounds and contact with ammonia.

**11 Toxicological information**

- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** Irritant to skin and mucous membranes.
  - **on the eye:** Irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.

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- **Other information (about experimental toxicology):**  
Toxicity to Animals:  
Inhalation, LC50 Rat, inhalation (mg/1/4 hr): Unknown  
Ingestion, LD50 Rat, oral (mg/kg): Unknown  
Skin contact, LD50 Rat, dermatological (mg/kg): Unknown  
Eye contact, LD50 Rat, dermatological (mg/kg): >5000 mg/kg
- **Subacute to chronic toxicity:**  
Chronic Effects on:  
Not listed as a carcinogen. Potential skin and respiratory sensitization.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful.  
Irritant.

**12 Ecological information**

- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

**13 Disposal considerations**

- **Product:**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

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**14 Transport information**

· DOT regulations:



- Hazard class: 2.1
- Identification number: UN1950
- Packing group: -
- Proper shipping name (technical name): AEROSOLS, flammable, n.o.s
- Label: 2.1

· Land transport ADR/RID (cross-border):



- ADR/RID class: 2 (5F) Gases
- Danger code (Kemler): 23
- UN-Number: 1950
- Packaging group: -
- Description of goods: 1950 AEROSOLS

· Maritime transport IMDG:



- IMDG Class: 2.1
- UN Number: 1950
- Label: 2.1
- Packaging group: -
- EMS Number: 2-13
- Marine pollutant: No

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· **Propper shipping name:** AEROSOLS

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 2.1  
· **UN/ID Number:** 1950  
· **Label:** 2.1  
· **Packaging group:** -  
· **Propper shipping name:** AEROSOLS, flammable, n.o.s

**15 Regulatory information**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

Product contains Diphenylmethane Diisocyanate (CAS 101-68-8) subject to the reporting limits of SARA 313 and is specifically addressed under CA,FL,MA,MN,NJ and PA state regulations. For specific SARA reporting requirements in your jurisdiction contact your specific state agency having jurisdiction over Community Right to Know and Emergency Planning.

9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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· **Chemicals known to cause reproductive toxicity:**  
None of the ingredients is listed.

· **Cancerogenity categories**  
· **EPA (Environmental Protection Agency)**  
9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues | D;CBD

· **MAK (German Maximum Workplace Concentration)**  
9016-87-9 | diphenylmethanediisocyanate, isomeres and homologues | 3

· **Product related hazard informations:**

· **Hazard symbols:**  
Xn Harmful  
F+ Extremely flammable

· **Risk phrases:**  
20 Harmful by inhalation.  
36/37/38 Irritating to eyes, respiratory system and skin.  
42/43 May cause sensitization by inhalation and skin contact.

· **Safety phrases:**  
2 Keep out of the reach of children.  
23 Do not breathe gas/fumes/vapour/spray.  
24/25 Avoid contact with skin and eyes.  
36/37 Wear suitable protective clothing and gloves.  
45 In case of accident or if you feel unwell, seek medical advice immediately.  
51 Use only in well-ventilated areas.

· **Special labeling of certain preparations:**  
Contains isocyanates. See information supplied by the manufacturer.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C/ 122° F, i.e. electric lights. Do not pierce or burn, even after use.  
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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- **Other regulations, limitations and prohibitive regulations**  
CERCLA:  
Components of this product are listed under this statute.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** R & D Laboratory
- **Contact:** Mr. S. Duren

USA