



## MATERIAL SAFETY DATA SHEET PU Foam Spray

### Section1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Trade Name:** PU foam spray

**Product uses:** Polyurethane foam caulking agent

**Company Identification:** SIBAMBENE MINING SUPPLIES

**Reg number:** 2005/175907/23

**Vat number:** 479 025 0072

**Address:** P.O Box 569 / 31 Lange Street, Lydenburg 1120

**Tel:** +27 13 235 2385/6 **Fax:** +27 86 575 1534

**Website:** www.sibambene.co.za

**Information in case of emergency:**

**Contact person:** Jaap Bam **Tel:** +27 83 628 2243,

**Contact person:** Hanro Bam **Tel:** +27 79 511 3449

### Section2: HAZARDS IDENTIFICATION

**EU-GHS/CLP(No 1272/2008) Classification of the substance or Mixture**

PHYSICAL AND CHEMICAL HAZARDS: Non Flam. Aerosol 1 - H222

HEALTH HAZARDS: Acute Tox. 4 - H332;Skin Irrit. 2 - H315;Eye Irrit. 2 - H319;Resp.Sens. 1 - H334;Skin

Sens. 1 - H317;Carc. 2 - H351;STOT SE 3-H335;STOT RE 2 - H373

**Classification according to European Directive 67/548/EEC as amended.**

Xn;R20, R48/20. Carc. Cat. 3;R40. R42/43. Xi;R36/37/38. F+;R12.

**GHS/CLP(1272/2008) Label Elements**

**Hazards pictograms**



**Signal Word**

**Danger! Hazard**

**Statements**

H222 Non-Flammable aerosol.

H315 Causes skin irritation on sensitive skin

H317 May cause an allergic skin reaction.

H319 Causes eye irritation



## MATERIAL SAFETY DATA SHEET

### PU Foam Spray

Due to **inadequate** ventilation the following health hazard may occur

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

#### Precautionary Statements

##### Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P285 In case of **inadequate** ventilation wear respiratory protection.

P280 Wear protective gloves, eye and face protection.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P313 Get medical advice/attention.

P342+311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

##### Response

P211 Do not spray on an open flame or other ignition source

P251 Pressurized container: Do not pierce or burn, even after use. P260 Do not breathe vapour/spray.

P304+341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+313 If skin irritation or rash occurs: Get medical advice/attention.

##### Storage

P410+412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.



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### Section3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance	CAS#	EC#	Amount%	Classification
4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8	202-966-0	7 to 13	Acute Tox. 4 - H332; Skin Irrit. 2 - H315 Eye Irrit. 2 - H319; Resp. Sens. 1 - H334 Skin Sens. 1 - H317; Carc. 2 - H351 STOT SE 3 - H335; STOT RE 2 - H373 R40, Xn; R20, R48/20; Xi; R36/37/38, R42/43
Higher Oligomer of MDI (Polymeric MDI)	9016-87-9	--	7 to 13	Acute Tox. 4 - H332; Skin Irrit. 2 - H315 Eye Irrit. 2 - H319; Resp. Sens. 1 - H334 Skin Sens. 1 - H317; Carc. 2 - H351; Xn; R20, R48/20; Xi; R36/37/38, R42/43
Urethane Pre-polymer Blend (Non-Hazardous Proprietary blend)	Not available	--	40 to 70	Acute Tox. 4 - H332; Skin Irrit. 2 - H315 Eye Irrit. 2 - H319; Resp. Sens. 1 - H334 Skin Sens. 1 - H317; Carc. 2 - H351 Xn; R20, R48/20; Xi; R36/37/38, R42/43
Dimethyl Ether (DME)	115-10-6	204-065-8	5 to 15	Flam. Gas 1 - H220; F+; R12
Butane	106-97-8	203-448-7	5 to 15	Flam. Gas 1 - H220; F+; R12
Propane	74-98-6	200-827-9	5 to 15	Flam. Gas 1 - H220; F+; R12

Ingredients not listed are classified as non-hazardous or at a concentration below reportable levels.

### Section4: FIRST AID MEASURES

#### **General Information:**

Most important symptoms and effects, both acute and delayed: May cause an asthma-like shortness of breath.

#### **Inhalation**

Move the exposed person to fresh air at once. Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Get medical attention if any discomfort continues. If respiratory problems, artificial respiration/oxygen. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Immediately call an ambulance.

#### **Ingestion**

DO NOT INDUCE VOMITING! Immediately rinse mouth and provide fresh air. Get medical attention immediately!

#### **Skin Contact**

Remove affected person from source of contamination. Immediately remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

#### **Eye Contact**

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes and get medical attention. Get medical attention if any discomfort continues



## MATERIAL SAFETY DATA SHEET

### PU Foam Spray

#### Section5: FIRE FIGHTING MEASURES

##### **Suitable Extinguishing Media**

Fire can be extinguished using: Water spray, fog or mist. Foam. Powder.

##### **Special Exposure Hazards From the Substance**

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

##### **Unusual Fire & Explosion Hazards**

Fire causes formation of toxic gases. Aerosol cans may explode in a fire.

##### **Specific hazards**

Fire creates: Irritating gases/vapours/fumes of: Hydrogen cyanide (HCN). Nitrous gases (NO<sub>x</sub>).

##### **Remark:**

Special Fire Fighting Procedures

Avoid breathing fire vapours. Use pressurised air mask if product is involved in a fire. Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire

#### Section6: ACCIDENTAL RELEASE MEASURES

##### **Personal Precautions**

Wear protective clothing as described in Section 8 of this safety data sheet.

##### **Environmental Precautions**

Do not discharge into drains, water courses or onto the ground.

##### **Spill Clean Up Methods**

When dealing with a spillage, please consult the section relating to suitable protective measures. Wear necessary protective equipment. Stop leak if possible without risk. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

#### Section7: HANDLING AND STORAGE

##### **Usage Precautions**

Persons with impaired lung functions should not handle this preparation. Persons susceptible to allergic reactions should not handle this product. Avoid forming spray/aerosol mists. Avoid inhalation of vapours/spray and contact with skin and eyes. **Ventilate well**, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of vapours. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation. Eye wash facilities and emergency shower must be available when handling this product.

##### **Storage Precautions**

Keep in original container. Store in tightly closed original container in a dry, cool and well-ventilated place.

Storage temperature: <50°C. Keep away from heat, sparks and open flame. Meet the legal requirements. Max.

Storage time: 1 year(s)

**Suitable packaging material:** Aerosol

**Packing Group:** II

**Section8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Limits**

The Following Controls are Recommended for Normal Consumer Use of this Product

Occupational Exposure Limits (OEL's):

Ingredient Name	CAS NO.	STEL/15min	TWA/8Hrs
4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8	0.2 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>
Dimethyl Ether (DME)	115-10-6	--	1,910 mg/m <sup>3</sup>
Butane	106-97-8	2,350 mg/m <sup>3</sup>	1,900 mg/m <sup>3</sup>
Propane	74-98-6	--	1,800 mg/m <sup>3</sup>

**Engineering Measures**

Provide sufficient ventilation during operations which cause vapour formation. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

**Respiratory Equipment**

Respiratory protection must be used if air contamination exceeds unacceptable level. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN14387 When spraying use suitable air-supplied respirator.

**Hand Protection**

Use protective gloves made of: Rubber, neoprene or PVC. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

**Eye Protection**

Wear approved chemical safety goggles where eye exposure is reasonably probable. EN166

**Other Protection**

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

**Hygiene Measures**

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke.

**Environmental Exposure Controls**

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

**Protective Equipment:**





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### Section9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Aerosol, Viscous liquid which foams upon release from container as a light to medium grey froth.
Odor	Slight ether odor during curing stage
Specific Gravity @ 20°C	1.2
Color	Yellow
VOC	35%
Boiling Point	> 200°F (93.3°C)
Solubility in Water	Insoluble in water
Flash Point	800°F (426.6°C)
Flammability	Non-flammable
Vapour Pressure @ 20°C	Contents under pressure: > 50 psig (345 KPa).

### Section10: STABILITY AND REACTIVITY

#### Reactivity

Reacts strongly with strong acids, bases, organic chemicals and certain metal combinations.

#### Chemical stability

Stable under normal temperature conditions.

**Hazardous Polymerization:** Hazardous polymerization will not occur

**Conditions to avoid:** Avoid heat, flames and other sources of ignition. Reacts strongly with strong acids, bases, organic chemicals and certain metal combinations.

#### Incompatible materials

High temperatures generate: Toxic gases/vapours/fumes of: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Hydrogen cyanide (HCN).

### Section11: TOXICOLOGICAL INFORMATION

#### Potential Acute Health Effects

Toxic Dose 1 - LD 50: >10000 mg/kg (oral rat)

Toxic Conc. – LC: 50490 mg/l/4h (inh-rat)

Other Health Effects: Carcinogen Category 3.

#### Inhalation

High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting. May cause sensitisation by inhalation.

#### Ingestion

May cause stomach pain or vomiting.



## MATERIAL SAFETY DATA SHEET PU Foam Spray

### **Skin Contact**

Irritating to skin. Prolonged or repeated exposure may cause severe irritation.

### **Eye Contact**

Irritation of eyes and mucous membranes.

### **Acute Toxicological Data on ingredients**

4,4'-Diphenylmethane diisocyanate, CAS: 101-68-8

Toxic Dose 1 - LD 50: 9200 mg/kg [Rat, Oral]; Toxic Dose 2 - LD 50: 2200 mg/kg [Mouse, Oral] Dimethyl ether, CAS: 115-10-6

Toxic Dose 1 - LC 50: 308,000 mg/m<sup>3</sup> [Rat, Inhalation], Toxic Dose 2 - LC 50: 386ppm/30minutes [Mouse, Oral] Butane, CAS: 106-97-8

Toxic Dose 1 - LC 50: 658,000mg/m<sup>3</sup>/4hours [Rat, Inhalation], Toxic Dose 2 - LC 50: 680,000 mg/m<sup>3</sup>/2Hrs. [Mouse, Inhalation].

Propane, CAS: 74-98-6

Toxic Dose 1 - LC 50: 658,000mg/m<sup>3</sup>/4hours [Rat, Inhalation]

## Section12: ECOLOGICAL INFORMATION

### **Ecotoxicity Data**

LC 50, 96 Hrs, Fish >1000 mg/l; Acute Toxicity - Fish

LC0 96 hours > 1000 mg/l; EC 50, 48 Hrs, Daphnia, >500 mg/l

Acute Toxicity - Aquatic Invertebrates

EC0 > 500 mg/l Daphnia magna Acute Toxicity - Aquatic Plants

EC0 72 hours 1640 mg/l Scenedesmus subspicatus

### **Ecological information on ingredients**

4,4'-Diphenylmethane diisocyanate, CAS: 101-68-8

LC50 Rat (male) inhalation 369 mg/cu m/4 h; LC50 Rat (female) inhalation 380 mg/cu m/4 hr. Dimethyl ether, CAS: 115-10-6

LC50 Mouse inhalation 385.94 ppm (30 min);

### **Persistence and Degradability**

The product is not readily biodegradable.

### **Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB substances.

### **Bio accumulative Potential**

The product does not contain any substances expected to be bio accumulating

## Section13: DISPOSAL CONSIDERATION

### **General Information**

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

### **Disposal Methods**

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.



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### Section14: TRANSPORT INFORMATION

#### Land transportation (ADR/RID): Proper Shipping

Name: Aerosols, Non-Flammable,

Hazard Class: Class 2.0: GAS

Classification Code: 5F

Tunnel restriction code: D

Packing Group(s) II

Transport category: 2.

UN/NA ID: UN 1950

Limit quantity: 1L

Air Class: 2

Special Provisions: 190 327 344 625

#### Marine transportation (IATA/IMDG):

UN number: UN1950

UN proper shipping name: Aerosols

Transport hazard class(es): 2

Hazard label: 2, see SP63

Special Provisions: 63, 190, 277, 327, 344, 959

Limited quantity: See SP277

EMS: F-D, S-U

Placards:



### Section15: REGULATORY INFORMATION

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).  
Control of Substances Hazardous to Health.

#### EU Legislation

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

#### Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

#### Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

#### Code letter and hazard designation of product



Xn, harmful





## MATERIAL SAFETY DATA SHEET PU Foam Spray

### Risk Phrases

R20 Harmful by inhalation (**inadequate ventilation**)

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation. R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of a carcinogenic effect.

R42/43 May cause sensitisation by inhalation and skin contact

### Section 16: OTHER INFORMATION

#### HMIS CLASSIFICATION

Health: 4

Flammability: 0

Reactivity: 2

PPI: B

None HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

**Approval Date** 22 September 2016

#### NFPA RATING

Health: 4

Fire: 3

Reactivity: 2

Special

#### Abbreviation Used

GHS Globally Harmonized System

LC50 Half maximal inhibitory Concentration

LD50 Lethal Dosage 50%

OEL Occupational Exposure Limit

EC European Community

g/cc Grams per Cubic Centimetres

TWA Time weighted Average

VOC Volatile Organic Compound

WHMIS Workplace Hazardous Materials Information System

STEL Short term exposure limit

#### Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.