MATERIAL SAFETY DATA SHEET

DOLPHIN PU FOAM 100

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Details

Product Name : **Dolphin PU FOAM 100**
Recommended Use : **Window & Door installation Gap Sealing**

Company Details

Company Name : **Al Muqarram Insulation Materials Industry L.L.C.**
Address : **Industrial Area # 15, Post Box No. 24756**
Sharjah, United Arab Emirates

Phone Number : **+971 (6) 5353796**
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2. COMPOSITION/INFORMATION ON INGREDIENT

Chemical Composition	CAS number	Conc.%
Polymethylene polyphenyl isocyanate	9016-87-9	40
Paraffin (alkanes, C14-17, chloro)	85535-85-9	20
bis (2,2-morpholinoethyl) ether	6425-39-4	5
Polyether polyol	25791-96-2	10
dimethyl ether	115-10-6	15
Propane & Isobutane	74-98-6 75-28-5	10

3. HAZARDS IDENTIFICATION

3.1 Classification of the substance or mixture:

3.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	1	H222: Extremely flammable aerosol
Aerosol	1	H229: Pressurized container: May burst if heated
Carc.	2	H351: Suspected of causing cancer
Lact.	-	H362: May cause harm to breast-fed children
STOT RE	2	H373: May cause damage to organs through prolonged or repeated
Eye Irrit.	2	H319: Causes serious eye irritation

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STOT SE	**3**	H335: May cause respiratory irritation
Skin Irrit.	2	H315: Causes skin irritation
Acute Tox.	4	H332: Harmful if inhaled.

3.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC F+; R12 – Extremely flammable. Carc. Cat. 3; R40 - Limited evidence of a carcinogenic effect Xn; R20 - 48/20 - Harmful by inhalation.

Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Xi; R36/37/38 - Irritating to eyes, respiratory system, and skin.

3.1 Label Elements:

Contains: Polymethylene polyphenyl isocyanate; alkanes, C14-17, chloro
Singed word | Danger

H-Statements

H222	Extremely flammable aerosol
H229	Pressurized container: May burst if heated
H351	Suspected of causing cancer
H362	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H315	Causes skin irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H413	May cause long lasting harmful effects to aquatic life

P-Statements

P101	Extremely flammable aerosol
P102	Pressurized container: May burst if heated
P210	Suspected of causing cancer
P211	Suspected of causing cancer
P251	May cause damage to organs through prolonged or repeated exposure
P362+P364	Causes serious eye irritation
P410+P412	May cause respiratory irritation

Supplemental information

- Persons already sensitized to diisocyanatos may develop allergic reactions when using this product
- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product
- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e., type A1 according to standard EN 14387) is used

3.2 Other hazards

Gas/vapor spreads at floor level: ignition hazard

5. FIRE FIGHTING MEASURES

5.1 Suitable Extinguishing Media : Quantities of water, Polyvalent foam, BC powder, & Carbon dioxide.

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5.2 Unsuitable Extinguishing Media	: None.
5.3 Special Exposure Hazards	: On burning, release of toxic and corrosive gases/vapors, hydrogen chloride, carbon monoxide and carbon dioxide. Gas/vapor spreads at floor level: ignition hazard. Gas/vapor flammable with air within explosion limits. Aerosol may explode under the effect of heat.
5.4 Instructions	: Dilute toxic gases with water spray. Take account of toxic firefighting water. Do not move the load if exposed to heat.
5.5 Special protective equipment for firefighters	: Heat/fire exposure; compressed air/oxygen apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal protection/precaution	: See headings 8.1/8.3/10.3.
6.2 Environment precautions	: Use appropriate containment to avoid environmental contamination.
6.3 Methods of cleaning up	: Allow product to solidify and remove it by mechanical means. Remove uncured foam with acetone.

7. HANDLING AND STORAGE

The information in this section is a general description. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Handling	: Observe very strict hygiene - avoid contact. In case of insufficient ventilation: keep naked flames/sparks away. Remove contaminated clothing immediately. Clean contaminated clothing.
7.2 Storage	: Keep out of direct sunlight. Keep away from: heat sources, ignition sources, acids, bases. **Storage Temperature** : < 50 °C **Quantity Limit** : N.D. kg **Storage Life** : 365 days **Materials for packaging** : aerosol dispenser
7.3 Specific uses	: See information provided in TDS

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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8.1 Exposure controls

8.1.1 Occupational exposure controls : Use only in well ventilated area

8.1.2 Environmental exposure controls : See heading 13

8.2 Personal Protection

8.2.1 Respiratory protection : In case of insufficient ventilation: respiratory protection with filter type A

8.2.2 Hand protection : Chemically resistant gloves

8.3 Eye protection : Safety glasses

8.4 Skin protection : Suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Physical form	: Aerosol
Odour	: Characteristic odour
Odour threshold	: No data available
Color	: Variable in color, depending on the composition
Particle size	: Not applicable
Explosion limits	: No data available
Flammability	: Extremely flammable aerosol.
Log Kow	: Not applicable (mixture)
Dynamic viscosity	: No data available
Kinematic viscosity	: No data available
Melting point	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available
Relative vapor density	: > 1
Vapor pressure	: No data available
Solubility	: organic solvents; soluble
Relative density	: water; insoluble
Decomposition temperature	: 0.95; 20 °C
Auto-ignition temperature	: No data available
Explosive properties	: No data available
Oxidizing properties	: No chemical group associated with oxidizing properties
pH	: No data available

9.2 Other Information

Absolute Density : 950 kg/m³; 20 °C

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid/reactivity : Unstable on exposure to heat.

10.2 Materials to avoid : Keep away from heat sources, ignition sources, acids, bases.

10.3 Hazardous decomposition products : On burning release of toxic and corrosive gases/vapors like hydrogen chloride, carbon monoxide and carbon dioxide.
On heating release of toxic/combustible gases/vapors (hydrogen cyanide).
May polymerize on exposure to temperature rise.

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May polymerize with a lot of compounds, i.e.: (strong) bases and amines.
Reacts violently with (some) acids/bases.

11. TOXICOLOGICAL INFORMATION

1.1 Acute Toxicity

POLYMETHYLENEPOLYPHENYLISOCYANATE

LD50 oral rat	: > 10000 mg/kg LD50
dermal rabbit	: N.D. mg/kg LD50
dermal rabbit	: > 5000 mg/kg LD50
inhalation rat	: N.D. mg/l/4h LC50
inhalation rat	: N.D. ppm/4 h

PROPANE

LD50 oral rat	: N.D.mg/kg LD50
dermal rabbit	: N.D. mg/kg LD50
dermal rabbit	: N.D. mg/kg LD50
inhalation rat	: 513 mg/l/4h LC50
inhalation rat	: 280000 ppm/4 h

ISOBUTANE

LD50 oral rat	: N.D.mg/kg LD50
dermal rabbit	: N.D. mg/kg LD50
dermal rabbit	: N.D. mg/kg LD50
inhalation rat	: 658 mg/l/4h LC50
inhalation rat	: N.D. ppm/4 h

11.2 Chronic Toxicity

POLYMETHYLENEPOLYPHENYLISOCYANATE

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed
Carcinogenicity (TLV)	: not listed
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed
Carcinogenicity (MAK)	: Category 3B
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: Group -
IARC classification	: 3

DIMETHYL ETHER

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed
Carcinogenicity (TLV)	: not listed
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed
Carcinogenicity (MAK)	: Category 3B
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: Group - D
IARC classification	: Not listed

11.3 Routes of exposure : inhalation, eyes, and skin

11.4 Acute effects/symptoms (upon overexposure)

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After inhalation	Dry/sore throat Coughing Irritation of the respiratory tract Irritation of the nasal mucous membranes Runny nose Following Symptoms may appear later: Inflammation of the respiratory tract Risk of lung oedema Respiratory difficulties
After Skin Contact	Tingling/irritation of the skin
After Eye Contact	Irritation of the eye tissue Lacrimation
11.5 Chronic Effects	May cause sensitization by skin contact May cause sensitization by inhalation Contains substance with uncertain carcinogenic properties (polymethylenepolyphenylisocyanate) **ON CONTINUOUS EXPOSURE/CONTACT:** Body temperature rise Tremor Feeling of weakness Headache Skin rash/inflammation May stain the skin Dry skin Risk of pneumonia

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity	: No data available	
12.2 Mobility	: **Volatile Organic Compounds (VOC): 18%** Insoluble in water For other physiochemical properties see section 9	
12.3 Persistence & degradability	**Biodegradation BOD_5**	: N.D. %ThOD
	water	: No data available
	soil	: T ½ N.D. days
12.4 Bio accumulative potential	**Low POW**	: N.D.
	BCF	: N.D.
12.5 Other adverse effects	**Effect on the ozone layer**	: Not dangerous
	Greenhouse effect	: No data available

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Effect on wastewater purification : No data available

13. DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

14. TRANSPORT INFORMATION

Classification of the substance in compliance with UN Recommendations	IATA	IMDG	RID/ADR
Proper shipping name	Aerosols, flammable	Aerosols, flammable	Aerosols, flammable
Hazard Class	2.1	2.1	2.1
UN Number	UN1950	UN1950	UN1950
Packing Group	--	--	--

15. REGULATORY INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
26.69%	

REACH Annex XVII – Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures, and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
• **polymethylene polyphenyl isocyanate** • **alkanes, C14-17, chloro**	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects On sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10. (c) hazard class 4.1. hazard class 5.1.	1. Shall not be used in: • ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, • tricks and jokes, • games for one or more participants, or any article intended to be used as such, even with ornamental aspects. 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: • can be used as fuel in decorative oil lamps for supply to the public, and, • present an aspiration hazard and are labelled with R65 or H304. 3. Decorative oil lamps for supply to the public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).

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		5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging, and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: • lamp oils, labelled with R65 or H304, intended for supply to the public are visibly, legibly, and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage". • grill lighter fluids, labelled with R65 or H304, intended for supply to the public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage". • lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. 6.No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the public. 7. Natural or legal persons placing on the market for the first-time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.
• **Polymethylene polyphenyl isocyanate**	Methylenediphenyl diisocyanate (MDI) including the following specific isomers: 4,4.- Methylenediphenyl diisocyanate. 2,4.- Methylenediphenyl diisocyanate. 2,2.- Methylenediphenyl diisocyanate	1.Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI for supply to the public, unless suppliers shall ensure before the placing on the market that the packaging: • contains protective gloves which comply with the requirements of Council Directive 89/686/EEC. • is marked visibly, legibly, and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging, and labelling of substances and mixtures: • Persons already sensitized to diisocyanatos may develop allergic reactions when using this product. • Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. • This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e., type A1 according to standard EN 14387) is used.

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		2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.

National Legislation the Netherlands

PU Foam

Waste identification (the Netherlands)	: LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	: 6

National Legislation Germany

PU Foam

WGK	: 2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

Polymethylene polyphenyl isocyanate

TRGS905-Krebserzeugend	: 3
TRGS905 - Erbgutverändernd	: -
TRGS905 - Fruchtbarkeitsgefährdend	: -
TRGS905 - Fruchtschädigend	: -
MAK - Krebserzeugend Kategorie	: 4
Schwangerschaft Gruppe	: C
MAK 8-Stunden-Mittelwert mg/m³	: .polymeres MDI. (einatembare Fraktion); 0.05 mg/m³; gemessen als : einatembare Fraktion (vgl. Abschn. Vd) S. 191)

alkanes, C14-17, chloro

MAK - Krebserzeugend Kategorie	: 3B
TA-Luft	: 5.2.5; I

National Legislation France

PU Foam

No data available

National Legislation Belgium

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PU Foam
No data available

National Legislation China

PU Foam
No data available

Other relevant data

PU Foam
No data available

Polymethylene polyphenyl	
IARC - classification	: 3: Polymethylene polyphenyl isocynate

Isocyanate alkanes, C14-17, chloro	
IARC - classification	: 2B; Chlorinated paraffins

15.2 Chemical safety assessment : No chemical safety assessment required.

16. ADDITIONAL INFORMATION

Full text of any H-statements referred to under headings 2 and 3

H220: Extremely flammable gas.
H222: Extremely flammable aerosol.
H229: Pressurized container: May burst if heated.
H280: Contains gas under pressure; may explode if heated.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.
H351: Suspected of causing cancer.
H362: May cause harm to breast-fed children.
H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H413: May cause long lasting harmful effects to aquatic life.

INTERNAL CLASSIFICATION BY BIG CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)	DMEL (Derived minimal effect level)
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %

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ErC50	EC50 in terms of reduction of growth
Rate LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organization for Economic Co-operation and Development
PBT	Persistent, Bio accumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bio accumulative

M-factor			
alkanes, C14-17, chloro	100	Acute	
alkanes, C14-17, chloro	10	Chronic {NRD)	

Specific concentration limits CLP			
Alkanes, C14-17, chloro	1,0 % ≤ C ≤ 20 %	EUH066	FEICA Position Paper on the classification and labelling of One Component Foam {OCF) containing Mid Chained Chlorinated Paraffin {MCCP) March 7th 2014)
	1,0 % ≤ C ≤ 20 %	Lact. ; H362	FEICA Position Paper on the classification and labelling of One Component Foam {OCF) containing Mid Chained Chlorinated Paraffin {MCCP) March 7th 2014)
	0,25 % ≤ C ≤ 20 %	Aquatic Chron. 4;H413	FEICA Position Paper on the classification and labelling of One Component Foam {OCF) containing Mid Chained Chlorinated Paraffin {MCCP) March 7th 2014)
Polymethylene polyphenyl isocyanate	C ≥ 5 %	Eye Irrit 2;H319	analogous to Annex VI
	C ≥ 5 %	Skin Irrit 2;H315	analogous to Annex VI
	C ≥ 0.1 %	Resp Sens 1;H334	analogous to Annex VI
	C ≥ 5 %	STOT SE 3;H335	analogous to Annex VI

The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport, and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations, and recommendations or which are necessary and/or useful based on the real applicable circumstances.

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