Low Pressure Polyurethane Foam

A-side Component (134a)

EU SDS

1. IDENTIFICATION

1.1 Product Name

Premseal QR Expanding Foam

ID SDS: A16178AE

REACH Registration: Mixture, see section 3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Low pressure polyurethane foam, Side-A component, for PROFESSIONAL USE ONLY

1.3 Supplier Information

Premier Sealant Systems Ltd., Mercia Way, Foxhills Industrial Park, Scunthorpe, North Lincolnshire, DN15 8RE

T: 01724 864 100

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product definition: Mixture

Classification	
Gases Under Pressure	Compressed Gas
Skin Irritation	Category 2
Skin Sensitisation	Category 1
Eye Irritation	Category 2A
Acute Toxicity Inhalation	Category 4
Respiratory Sensitising	Category 1
STOT Single Exposure	Category 3 (STOT SE 3)
STOT Repeated Exposure	Category 2 (STOT RE 2)

2.2 Label Elements

2.2.1 Hazard Symbols

Warning

2.2.2 Hazard Statements

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
H373	May cause damage to organs (respiratory tract) through prolonged or repeated exposure

2.2.3 Precautionary Statements

Prevention

P202	Do not handle until all safety precautions have been read and understood
P251	Pressurized container: Do not pierce or burn, even after use
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands and other skin areas exposed to material thoroughly after handling
P271	Use outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves/protective clothing/eye protection/face protection
P284	Wear respiratory protection

Response

P302+P352+P333+P313	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention
P304+P341	IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P305+P313	IF exposed or concerned: Get medical advice
P314	Get medical attention if you feel unwell
P337+P313	If eye irritation persists: Get medical attention
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor
P362	Take off contaminated clothing and wash before reuse

Storage

P405	Store locked up
P410+P403	Protect from sunlight. Store in a well-ventilated place

Disposal

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations

2.3 Other Hazards

There are no other hazards otherwise classified that have been identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances – Classification of Substances

Not applicable

3.2 Mixtures

Chemical characterisation (preparation):

% by Weight	Ingredient	CAS No.	EC Number	REACH Registration	Classification
30-40	4,4' Diphenylmethane diisocyanate	101-68-8	202-966-0	01 - 211945701 4-47-0049	Skin Irrit. 2 H315 Skin Sens. 1 H317 Resp. Sens. 1 H332 Eye Irrit. 2A H319 Acute Tox. 4 H334 STOT SE 3 H373 STOT RE 2 H3
30-60	Polymethylene polyphenyl isocyanate	9016-87-9	500-079-6		Skin Irrit. 2 H315 Skin Sens. 1 H317 Resp. Sens. 1 H332 Eye Irrit. 2A H319 Acute Tox. 4 H334 STOT SE 3 H373 STOT RE 2 H373
<10	Nitrogen	7727-37-9	231-783-9		
5-10	1,1,1,2-Tetrafluoroethane	811-97-2	212-377-0		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation	If product vapours cause respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen. If respiratory arrest occurs, start artificial respiration by a trained individual. Loosen tight fitting clothing such as a jacket or tie. Seek medical attention immediately. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

Contact with Eyes	Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do, remove contact lenses. If irritation persists, get medical attention
Skin Irritation	Flush skin with large amounts of water while removing contaminated clothing. Gently wipe product from skin with a damp cloth and continue rinsing for 15 minutes. Wash clothing before reuse. Call a physician if irritation persists
Ingestion	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible). Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high propellant concentrations (enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe victim for the development of cardiac arrhythmias.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media	Use dry chemical, carbon dioxide, alcohol resistant foams and water spray
Unsuitable Extinguishing Media	None

5.2 Special hazards arising from the substance or mixture

Cans, cylinders, or refillable cylinders may explode due to the build-up of pressure when exposed to extreme heat. During a fire, isocyanate vapours or other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Hazardous decomposition products may include and are not limited to: Nitrogen oxides, Hydrogen cyanide, Carbon monoxide, and Carbon dioxide.

5.3 Advice for firefighters

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ventilate the area.

6.2 Environmental Precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and Material for Containment and Cleaning Up

Cover drains and contain spill. Cover spilled material with a large quantity of inert absorbent. Collect material and place into an approved, open-head metal container. Decontaminate the spill and waste area with a neutralization solution. Wait 15 minutes. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Allow container to vent for 72 hours to let carbon dioxide escape. Dispose of waste via a licensed waste disposal contractor in accordance with all applicable federal, state, provincial and local regulations. Ensure adequate ventilation.

Additional pill procedures – neutralisation solutions (decontamination):

Use tens parts or solutions for each part of the spill

1. An aqueous solution containing 3-8% ammonium hydroxide or concentrated ammonia and 0.2-0.5% liquid detergent
2. An aqueous solution containing 5-10% sodium bicarbonate and 0.2-0.5% liquid detergent

6.4 Reference to other sections

For indications about waste treatment & disposal. See Section 13. See Section 7 for information about safe handling

7. HANDLING AND STORAGE

7.1 Precaution for Safe Handling

For Industrial or professional use only. Observe label precautions, do not use until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray during application.

7.1.1 Protective Measures

Use adequate ventilation to keep airborne isocyanate levels below exposure limits. Recommend wearing respiratory protection when spraying this material. Warning symptoms (irritation of the eyes, nose, or throat, or odour) are not adequate to prevent overexposure from inhalation. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed. Avoid contact with skin or eyes. Wear appropriate personal protective equipment during use (see Section 8). Wash thoroughly after handing product. Do not puncture or incinerate cylinders. Cylinders are under pressure. Keep cylinder valves closed when not in use.

7.1.2 Advice on Protection against Fire and Explosion

Contents under pressure. Exposure to high temperatures can cause cylinders to rupture or explode.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area and away from incompatible materials (see Section 10.5). Storage temperature is 60-90ºF (16-32ºC). Products stored below 60ºF (16ºC) or above 90ºF (32ºC) must be given adequate time to warm up/cool down. Do not expose the cylinders /kits to open flame or temperatures above 122ºF (50ºC); storage at elevated temperatures can cause the container to rupture. Excessive heat can cause premature aging of components resulting in a shorter shelf life. Protect unused product from freezing. Storage below 60ºF (16ºC) may affect foam quality if chemicals are not warmed to room temperature before using. Protect cylinders from physical abuse. Always store the cylinders in the upright position. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Ingredient	CAS-No.	OSHA-PEL	ACGIH-TLV	Other
4,4' Diphenylmethane diisocyanate	101-68-8	0.2 mg/m3 ; 0.02 ppm CEIL	0.051 mg/m3 ; 0.005 ppm (8 hours TWA)	NIOSH- 0.2 mg/m3 ; 0.02 ppm CEIL 0.051 mg/m3 ; 0.005 ppm TWA EL (Canada) Long Term Value 0.005 ppm; Ceiling limit value 0.01 ppm; Skin: S EV (Canada) Long Term Value 0.005 ppm; Ceiling limit value 0.02 ppm

1,1,1,2 Tetrafluoroethane	811-97-2	No information	No information	WEEL 1,000 ppm

8.2 Exposure Controls

8.2.1 Appropriate Engineering Controls

Use local and general exhaust ventilation to control levels of exposure.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/Face Protection	Wear protective goggles or safety glasses with side shields.
Skin Protection	Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.
Other Protective Equipment	Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.
Respiratory Protection	Atmospheric levels should be maintained below the exposure guidelines. Use products only in a well-ventilated area. Engineering and administrative (work practices) controls should be implemented to protect the workers. If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and a particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The odour and irritancy of this material is inadequate to warn of excessive exposure.
Hygiene Measures	An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.
Medical Surveillance	All employees/end-users who work with isocyanates should undergo a medical evaluation. A history of eczema or respiratory allergies are possible reasons for medical exclusion from working with isocyanates. Users with a prior history of isocyanate sensitization should be excluded from further work with isocyanates. Once a user is diagnosed with being sensitized to isocyanates, no further exposure should be permitted.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Amber to dark brown liquid. Forms an off-white to yellowish froth when released from the container
Odour	Slightly musty
Odour Threshold	No data available
pH	No data available
Melting Point / Freezing Point	No data available
Boiling Point	MDI boil at 406°F (208°C)
Flash Point	MDI 390°F (>199°C)
Evaporation Rate	No data available
Flammability	No data available
Explosion Limits	Low: No data available, High: No data available
Vapor Pressure	In container: >50 psi (>345kPa) Of liquid: <1 mm Hg at 40°C
Vapor Density	No data available
Relative Density	~ 1.2 at 25°C (Water = 1)
Solubility in Water	Insoluble; reacts slowly with water during cure, liberating traces of CO_2
Partition Coefficient: n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Oxidising Properties	No data available
VOC Content	0 g/L (minus exempted compounds)

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable under normal conditions of use and recommended storage conditions. (See Section 7)

10.3 Possibility of Hazardous Reactions

Exposure to elevated temperatures can cause containers to rupture or explode. Avoid moisture, material reacts slowly with water releasing carbon dioxide. Contents are under pressure.

10.4 Conditions to Avoid

Temperatures below 60°F (16°C) or temperatures above 90°F (32°C). Avoid heat and flames.

10.5 Incompatible Materials

Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers. Avoid contamination with water.

10.6 Hazardous Decomposition Products

See Section 5.2 for hazardous decomposition products related to combustion.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Signs and symptoms or Exposure based on test data and/or information on the components, this material may produce the following health effects.

Inhalation	Isocyanates vapours at concentrations above the concentration limits or guidelines can irritate the mucous membranes in the respiratory tract with symptoms of burning sensation, runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (difficulty breathing). Persons with a pre-existing, nonspecific bronchial hyperactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in the lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible; however, increased lung sensitivity may persist for a longer period of time. May be harmful if inhaled. Inhalation of the propellant may cause light-headedness, headache and lethargy.
Contact with Eyes	May cause eye irritation. Symptoms may include redness, swelling, stinging, and tearing. May cause temporary corneal injury. Product vapor may cause eye irritation with symptoms of burning and tearing.

Contact with Skin	May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic reaction. Can cause sensitization. Persons previously sensitized can experience allergic skin reactions. May be harmful if absorbed through the skin.
Ingestion	May be harmful if swallowed. May cause gastrointestinal irritation: stomach distress, nausea, or vomiting.

11.2 Acute Toxicity

Acute Oral Toxicity	Expected to have low acute oral toxicity. 4,4'- Diphenylmethane diisocyanate: LD50, rat: >5000 mg/kg
Acute Inhalation Toxicity	At room temperature, vapours are minimal. See above for possible exposures. 4,4'- Diphenylmethane diisocyanate: LC50, rat: 490 mg/m3 4h
Acute Dermal Toxicity	Expected to have a low acute dermal toxicity. 4,4'- Diphenylmethane diisocyanate: LD50, rabbit: >5000 mg/kg
Skin Irritation	Causes skin irritation
Eye Irritation	Causes moderate to serious eye irritation
Sensitisation	May cause skin and respiratory sensitisation
Genotoxicity	Genetic toxicity data for MDI is inconclusive. Some in-vitro studies yield positive results, while other test data were negative
Mutagenicity	Test data using laboratory animals was predominately negative
Specific organ toxicity- single exposure	May cause respiratory irritation
Specific organ toxicity- repeated exposure	May cause damage to the lungs, central nervous system and skin
Aspiration Hazard	No data available

11.3 Additional Information

MDI and PMDI: IARC Group 3 carcinogen- Not classifiable as to its carcinogenicity to humans. Not listed as a carcinogen by ACGIH, OSHA or NTP. MDI/PMDI did not cause birth defects in laboratory animals; fatal effects occurred only at high doses which were toxic to the mother. Lung tumours have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/PMDI (6mg/m3) for their lifetime. Tumours occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Acute and Prolonged Toxicity to Fish	LC50- Brachydanio rerio (Zebra fish), 96h >1000 mg/l
Toxicity to aquatic invertebrates	EC50- Daphnia magna (Water flea) 48h >1000 mg/l
Toxicity to aquatic plants	NOEC- Desmodesmus subspicatus (Green algae) static, 72 h >1640 mg/l, growth rate inhibition
Toxicity to aquatic microbes	OECD 209 Test- Activated Sludge 3 h >100 mg/l, respiration inhibition
Toxicity to soil dwelling organisms	EC50- Eisenia fetida (earthworms) 14 d >1000 mg/kg

12.2 Persistence and Degradability

Product is not readily biodegradable. In aquatic and terrestrial environments, this material reacts with water, forming predominantly insoluble and stable polyureas. In the atmospheric environment, this material is expected to have a short tropospheric half-life, based on data from similar diisocyanates.

12.3 Bio-accumulative Potential

Bioaccumulation potential is low.

12.4 Mobility

Expected to have low mobility based on product's reactivity with water, which forms predominately insoluble polyureas.

12.5 Results of PBT and vPvB Assessment

No date available.

12.6 Other Adverse Effects

Do not allow material to run into surface waters, wastewater, or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

13.1.1 Procedure for handling empty or partially used disposable cylinders (not returned)

1. DO NOT INCINERATE CYLINDERS.
2. Empty cylinders by dispensing the foam into a waste container like a cardboard box or plastic bag. Depressurize the used cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer sprays chemical.
3. Remove the nozzle and then continue to depressurize by dispensing the remaining chemical(s) into a waste container (a box lined with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the pressure is down to a minimum or there are just large bubbles in the hose.
4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a 9/16" wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in the hoses.
5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.
6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave valves OPEN-do not close. DO NOT PUNCTURE.
7. The user of this material has the responsibility to dispose of empty cylinders, unused material and residues in compliance to all applicable federal, state, international and local regulations regarding the treatment, storage, and disposal for hazardous and non-hazardous wastes. Check with your local waste disposal service for guidance.

Note: After dispensing if one cylinder had chemical left in it, treat as hazardous material.

14. TRANSPORTATION

Note: Transportation information is for reference only. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

Ground	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)
Air	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label) Packing Instructions (Cargo & Passenger) 218
Water	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)

15. REGULATORY INFORMATION

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

15.1.1 U.S Federal Regulations

OSHA Hazard Communication Standard	This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200
TSCA Status	All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product is not subject to TSCA 12(b) Export Notification.

15.1.2 Superfund Amendments and Reauthorisation Act (SARA)

SARA Section 311/312 Hazard Categories	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)
SARA 313 Information	MDI and PMDI are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance	No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification	No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA)	This product contains the following CERCLA reportable substances: 4,4'-Diphenylmethane diisocyanate (CAS #101-68-8), RQ- 2,268 kg (5,000 lbs).
Clean Air Act (CAA)	4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.
Clean Water Act (CWA)	4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

15.1.3 U.S State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986	None of the ingredients are listed.

15.1.4 Other Regulations

Other U.S. State Inventories:	4, 4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: CA, DE, ID, IL, ME, MA, MN, NJ, PA, WA, WI Polymeric MDI (CAS #9016-87-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, NJ, MN 1,1,1,2- Tetrafluoroethane (CAS #811-97-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: ME, WI
Canada Controlled Product Regulations (CPR)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.
Canadian Ingredient Disclosure List (IDL)	4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the IDL.
Canadian National Pollutant Release Inventory (NPRI)	MDI and PMDI are listed on the NPRI
WGK, Germany (Water danger/protection)	1
Global Chemical Inventory Lists	United States: Toxic Substance Control Act (TSCA)- Yes Europe: Inventory of New and Existing Chemicals- (EINECS)- Yes

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

16.1 PPE Symbols

NFPA: Health Hazard 2; Flammability 1; Reactivity 1

HMIS: Health Hazard 2; Flammability 1; Physical Hazard 1

Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

16.2 Date of preparation

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.

Information contained herein is deemed to be reliable, conservative and accurate. Premseal reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision- December 6, 2018 (Date of Preparation) Version 1.0

Low Pressure Polyurethane Foam

B-side Component (134a)

EU SDS

1. IDENTIFICATION

1.1 Product Name

Premseal QR Expanding Foam

ID SDS: A16178BE

REACH Registration: Mixture, See Section 3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Low pressure polyurethane foam, Side-B component, for PROFESSIONAL USE ONLY

1.3 Supplier Information

Premier Sealant Systems Ltd., Mercia Way, Foxhills Industrial Park, Scunthorpe, North Lincolnshire, DN15 8RE

T: 01724 864 100

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Product definition: Mixture

Classification	
Gases Under Pressure	Compressed Gas
Skin Irritation	Category 2
Eye Irritation	Category 2A

2.2 Label Elements

2.2.1 Hazard Symbols

Warning

2.2.2 Hazard Statements

H280	Contains gas under pressure; may explode if heated
H315	Causes skin irritation
H319	Causes serious eye irritation

2.2.3 Precautionary Statements

Prevention

P202	Do not handle until all safety precautions have been read and understood
P251	Pressurized container: Do not pierce or burn, even after use
P264	Wash hands and other skin areas exposed to material thoroughly after handling
P271	Use outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P285	In case of inadequate ventilation: Wear respiratory protection

Response

P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321	Specific treatment: Seek immediate medical advice. Refer to product label and Section 4 of this SDS
P333+P313	If skin irritation or rash occurs: Get medical attention
P337+P313	If eye irritation persists: Get medical attention
P362	Take off contaminated clothing and wash before reuse

Storage

P405	Store locked up
P410+P403	Protect from sunlight. Store in a well-ventilated place

Disposal

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations

2.3 Other Hazards

There are no other hazards otherwise classified that have been identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances – Classification of Substances

Not applicable

3.2 Mixtures

Chemical characterisation (preparation) :

% by Weight	Ingredient	CAS No.	EC Number	REACH Registration	Classification
15-45	Tris (1-chloro-2-propyl) Phosphate	1244733-77-4	807-935-0	01-2119486772-26-0017	No information
10-30	1,1,1,2-Tetrafluoroethane	811-97-2	212-377-0	No information	Compressed Gas H280
<10	Nitrogen	7727-37-9	231-783-9	No information	Compressed Gas H280
1-5	Pentamethyldiethyl-enetriamine	3030-47-5	221-201-1	No information	Skin Irrit 2 H315 Eye Irrit. 2A H319
0.5-1.5	Diethylene Glycol	11-46-6	203-872-2	No information	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation	If product vapours cause respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen. If respiratory arrest occurs, start artificial respiration by a trained individual. Loosen tight fitting clothing such as a jacket or tie. Seek medical attention immediately.
Contact with Eyes	Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do, remove contact lenses. If irritation persists, get medical attention.
Skin Irritation	Flush skin with large amounts of water while removing contaminated clothing. Gently wipe product from skin with a damp cloth and continue rinsing for 15 minutes. Wash clothing before reuse. Call a physician if irritation persists.
Ingestion	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible). Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high propellant concentrations (enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe victim for the development of cardiac arrhythmias.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media	Use dry chemical, carbon dioxide, alcohol resistant foams and water spray
Unsuitable Extinguishing Media	None

5.2 Special hazards arising from the substance or mixture

Cans, cylinders, or refillable cylinders may explode due to the build-up of pressure when exposed to extreme heat. Highly toxic gases may be generated by thermal decomposition or combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Hazardous decomposition products may include and are not limited to: Carbon monoxide, Carbon dioxide, Aldehydes, Oxides of Nitrogen.

5.3 Advice for firefighters

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ventilate the area.

6.2 Environmental Precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and Material for Containment and Cleaning Up

Cover drains and contain spill. Cover spilled material with a large quantity of inert absorbent. Collect material and place into an approved, open-head metal container. Clean contaminated area with soap and water.

6.4 Reference to other sections

For indications about waste treatment & disposal. See Section 13. See Section 7 for information about safe handling

7. HANDLING AND STORAGE

7.1 Precaution for Safe Handling

For Industrial or professional use only. Observe label precautions, do not use until all safety precautions have been read and understood.

7.1.1 Protective Measures

Wear all appropriate protective equipment specified in Section 8. Keep cylinders/valves closed when not in use. Recommend using in a well-ventilated area with respiratory protection. Avoid contact with eyes and skin. Keep out of reach of children.

7.1.2 Advice on Protection against Fire and Explosion

Contents under pressure. Exposure to high temperatures can cause cylinders to rupture or explode.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, well-ventilated area and away from incompatible materials (see Section 10.5). Storage temperature is 60-90°F (16-32°C). Products stored below 60°F (16°C) or above 90°F (32°C) must be given adequate time to warm up/cool down. Do not expose the cylinders /kits to open flame or temperatures above 122°F (50°C); storage at elevated temperatures can cause the container to rupture. Excessive heat can cause premature aging of components resulting in a shorter shelf life. Protect unused product from freezing. Storage below 60°F (16°C) may affect foam quality if chemicals are not warmed to room temperature before using. Protect cylinders from physical abuse. Always store the cylinders in the upright position. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Ingredient	CAS-No.	OSHA-PEL	ACGIH-TLV	Other
Diethylene Glycol	101-68-8	No information	No information	WEEL 10 mg/kg
1,1,1,2 Tetrafluoroethane	811-97-2	No information	No information	WEEL 1,000 ppm

8.2 Exposure Controls

8.2.1 Appropriate Engineering Controls

Use local and general exhaust ventilation to control levels of exposure.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/Face Protection	Wear protective goggles or safety glasses with side shields.
Hand Protection	Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should take into account potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.
Other Protective Equipment	Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.
Respiratory Protection	Atmospheric levels should be maintained below the exposure guidelines. Use products only in a well-ventilated area. Engineering and administrative (work practices) controls should be implemented to protect the workers. If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and a particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The odour and irritancy of this material is inadequate to warn of excessive exposure.
Hygiene Measures	An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Amber to dark brown liquid. Forms an off-white to yellowish froth when released from the container
Odour	Slightly fluorocarbon and amine odour
Odour Threshold	No data available
pH	No data available
Melting Point / Freezing Point	No data available
Boiling Point	Propellant -26°C (-15°F); >93°C (200°F), liquid phase
Flash Point	Estimated >392°F (>200°C).

Evaporation Rate	No data available
Flammability	No data available
Explosion Limits	Low: No data available, High: No data available
Vapor Pressure	In container: >50 psi (>345kPa) Of liquid: <1 mm Hg at 40°C
Vapor Density	No data available
Relative Density	~ 1.2 at 25°C (Water = 1)
Solubility in Water	Water. Partly soluble, does not react
Partition Coefficient: n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Oxidising Properties	No data available
VOC Content	11.4g/L (minus exempted compounds)

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable under normal conditions of use and recommended storage conditions. (See Section 7)

10.3 Possibility of Hazardous Reactions

Exposure to elevated temperatures can cause containers to rupture or explode. Contents are under pressure.

10.4 Conditions to Avoid

Temperatures below 60°F (16°C) or temperatures above 90°F (32°C). Avoid heat and flames.

10.5 Incompatible Materials

Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers. Avoid contamination with water.

10.6 Hazardous Decomposition Products

See Section 5.2 for hazardous decomposition products related to combustion.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Signs and symptoms or Exposure based on test data and/or information on the components, this material may produce the following health effects.

Inhalation	Mist or vapor may cause irritation of the nose, throat and respiratory tract. Symptoms may include sore throat, coughing, headache, nausea and shortness of breath. Inhalation of propellant may cause light-headedness, headache and lethargy.
Contact with Eyes	May cause serious eye irritation. Symptoms may include redness, swelling, stinging, and tearing. May cause temporary corneal injury. Product vapor may cause eye irritation with symptoms of burning and tearing.
Contact with Skin	May cause mild skin irritation. Symptoms may include localized redness and discomfort.
Ingestion	May cause gastrointestinal irritation: stomach distress, nausea, or vomiting. Repeated ingestion may be harmful.

11.2 Acute Toxicity

LD/LC50 Values that are relevant for classification: None

Skin Irritation	Irritant to skin and mucous membranes.
Eye Irritation	Irritating effect
Sensitisation	Based on available data, the classification criteria are not met
IARC (International Agency for Research on Cancer)	None of the ingredients are listed
NTP (National Toxicology Program)	None of the ingredients are listed
OSHA-Ca (Occupational Safety & Health Administration	None of the ingredients are listed Probable routes of exposure: Inhalation, eye contact and skin contact.
Acute Effects	Irritating to eyes and skin.
Mutagenicity	Based on available data, the classification criteria are not met

Specific organ toxicity- single exposure	No data available
Specific organ toxicity- repeated exposure	No data available
Aspiration Hazard	No data available

11.3 Additional Information

This product has not been tested. The above information has been derived from the properties of the individual components.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The ecotoxicity of this product has not been experimentally determined. However, it is expected to have low acute aquatic toxicity based on the acute aquatic toxicity of the individual components and their concentrations in this composition.

12.2 Persistence and Degradability

Product is readily biodegradable.

12.3 Bio-accumulative Potential

No data available

12.4 Mobility

No data available

12.5 Results of PBT and vPvB Assessment

No date available.

12.6 Other Adverse Effects

Do not allow material to run into surface waters, wastewater, or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Always wear proper protective equipment as you would while spraying the two-component foam in a well-ventilated area.

13.1.1 Procedure for handling empty or partially used disposable cylinders (not returned)

1. DO NOT INCINERATE CYLINDERS.
2. Empty cylinders by dispensing the foam into a waste container like a cardboard box or plastic bag. Depressurize the used cylinders using the dispensing unit with a new nozzle attached. Spray the foam until one of the components/cylinders no longer sprays chemical.
3. Remove the nozzle and then continue to depressurize by dispensing the remaining chemical(s) into a waste container (a box lined with a plastic bag) that has adequate industrial liquid absorbing medium in the bottom. Dispense the residual chemicals until the pressure is down to a minimum or there are just large bubbles in the hose.
4. Close the cylinder valves completely, and then operate the dispensing unit again to empty and depressurize the hoses. Use a 9/16" wrench and remove the hoses from the cylinders. Use caution in case there is some residual chemical and/or pressure in the hoses.
5. Invert the cylinder and point away from face. Slowly open the cylinder over the waste container to catch any residual spray.
6. Return the cylinder to an upright position. Shake the container; there should not be any sloshing of liquid. Make sure to leave valves OPEN-do not close.
7. The user of this material has the responsibility to dispose of empty cylinders, unused material and residues in compliance to all applicable federal, state, international and local regulations regarding the treatment, storage, and disposal for hazardous and non-hazardous wastes. Check with your local waste disposal service for guidance.

Note: After dispensing if one cylinder had chemical left in it, treat as hazardous material.

14. TRANSPORTATION

Note: Transportation information is for reference only. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

Ground	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)
Air	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label) Packing Instructions (Cargo & Passenger) 218
Water	UN3500 Chemical Under Pressure n.o.s. (Fluorinated hydrocarbon, nitrogen) 2.2 (Non-Flammable Gas Label)

15. REGULATORY INFORMATION

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

15.1.1 U.S Federal Regulations

OSHA Hazard Communication Standard	This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200
TSCA Status	All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product is not subject to TSCA 12(b) Export Notification.

15.1.2 Superfund Amendments and Reauthorisation Act (SARA)

SARA Section 311/312 Hazard Categories	Acute Health Hazard, Sudden Release of Pressure Hazard
SARA 313 Information	No components of the product are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance	No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification	No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA)	None of the substances in this product are contained in levels that exceed the threshold (de minimis) reporting levels established by CERCLA
Clean Air Act (CAA)	This product does not have any components listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.

Clean Water Act (CWA)	This products does not have any components listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

15.1.3 U.S State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986	WARNING: This product can exposure you to chemicals including 1,4-dioxane, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov..

15.1.4 Other Regulations

Other U.S. State Inventories:	Diethylene glycol (CAS#111-46-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: MN, PA Pentamethyldiethylenetriamine (CAS # 3030-47-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: PA 1,1,1,2- Tetrafluoroethane (CAS #811-97-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: ME, WI
Canada Controlled Product Regulations (CPR)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.
WGK, Germany (Water danger/protection)	1
Global Chemical Inventory Lists	United States: Toxic Substance Control Act (TSCA)- Yes Europe: Inventory of New and Existing Chemicals- (EINECS)- Yes

16. OTHER INFORMATION

16.1 PPE Symbols

NFPA: Health Hazard 2; Flammability 1; Reactivity 1

HMIS: Health Hazard 2; Flammability 1; Physical Hazard 1

Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

16.2 Date of preparation

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers. Information contained herein is deemed to be reliable, conservative and accurate. Premseal reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision-December 5, 2018 (Date of Preparation) Version