

SAFETY DATA SHEET – SET

FST-BP Foam Sealant Burst Pack Type FST Kit

Product ID numbers: FST-BP-200, FST-BP-XXX (where XXX is the package code.)

Date Compiled: 24 August 2017



Supplier/Manufacturer:

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

Polywater Europe BV
Zuidhaven 9-11 Unit B2
4761 CR Zevenbergen
Netherlands
Tel: +31 (0)10 2330578
Email: sds@ polywater.com

Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

This product is a kit or a multi-part product with independent components. An SDS for each component is included. Do not separate SDSs.

Contains

FST-BP-A Foam Sealant Burst Pack Part A SDS
FST-BP-B Foam Sealant Burst Pack Part B SDS
HP Wipe Cleaning Towelette

SDSs are classified according to EU Regulation (EC) No 1272/2008 and Australia WHS Regulation (2011).

Each Kit may or may not contain all SDS components

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

**Product Name: FST™ Foam Sealant
Burst Pack FST-BP (Part A)**

Product ID numbers: FSTBP-200KIT1, FSTBP-200KIT6;
FST-BP-XXX (where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Sealant, duct block; two-part material

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

Polywater Europe BV
Zuidhaven 9-11 Unit B2
4761 CR Zevenbergen
Netherlands
Tel: +31 (0)10 2330578
Email: sds@polywater.com

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

Local Contact Info

1.4 Emergency telephone numbers

INFOTRAC 1-800-535-5053 (USA) +1-352-323-3500 (International)

National Poison Information Centre (NVIC): +31(0)30 274 8888
(Professional use for acute poisoning only, Netherlands.)
Insert local poison control information here.

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to EU Regulation (EC) No 1272/2008 and Australia WHS Regulation (2011).

Acute Toxicity, Cat 4

Skin Irritation, Cat 2; H315

Eye Irritation, Cat 2; H319

Respiratory Sensitization, Cat 1; H334

Skin Sensitization, Cat 1; H317

Carcinogenicity, Cat 2; H351

Target Organ Toxicity (single exposure), Cat 3; H335

Target Organ Toxicity (repeated exposure), Cat 2; H373

2.2 Label elements

Contains: Polymeric diphenylmethane diisocyanate; 4,4'-Diphenylmethane diisocyanate (MDI)



Pictograms:

Signal word: Danger

Hazard Statements:
H332 Harmful if inhaled.

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H351 Suspected of causing cancer.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated inhalative exposure.

Supplemental Hazard Statement

- EUH304 Contains isocyanates. May produce an allergic reaction.

Precautionary Statements:

- P260 Do not breathe dust, vapor, or spray.
- P284 In case of inadequate ventilation wear respiratory protection.
- P280 Wear protective gloves, protective clothing and eye protection.
- P304 + P340 IF INHALED: Remove 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.
- P308 + P313 IF exposed or concerned: Get medical advice.

Notes:

4,4'-methylenediphenyl diisocyanate (MDI) has not been designated as a carcinogen by IARC, NTP, ACGIH, OSHA, or the United States EPA. There are inadequate human carcinogenicity data, and only limited animal data. Additionally, the IARC Working Group noted that tumorigenic effects observed in animals may be attributed to non-specific particle effect (IARC monograph 71). Monomeric MDI (CAS # 101-68-8) has an EU harmonized classification (Annex VI to CLP) including Carc 2 (H351), but we do not expect this product to pose a carcinogenic hazard if users avoid inhalation of vapor above exposure limits.

2.3 Other hazards:

Information according to XVII. 56 REACH

Persons already sensitized to diisocyanates 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. Pregnant women should absolutely avoid inhalation and skin contact.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>	<u>GHS/CLP Classification</u>
Polymeric diphenylmethane diisocyanate	9016-87-9		30 - 60	Acute Tox 4, Skin Irrit 2, Eye Irrit 2, Resp Sens1, STOT SE 3, STOT RE 2
4,4'-Diphenylmethane diisocyanate (MDI)	101-68-8	202-966-0	30 - 60	Acute Tox 4, Skin Sens 1, Skin Irrit 2, Eye Irrit 2, Resp Sens1, STOT SE 3, Carc 2, STOT RE 2

4. First Aid Measures

4.1 Description of first aid measures

- Eye Contact:** Immediately flush eyes with large quantity of water for 15 minutes. Seek medical attention.
- Skin Contact:** Remove contaminated clothing; flush skin thoroughly with soap and water. If irritation occurs, seek medical attention.
- Inhalation (Breathing):** If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention.
- Ingestion (Swallowing):** If swallowed, rinse mouth and drink plenty of water. Do not induce vomiting. If

patient is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person. Do not leave victim unattended. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause allergic skin and respiratory reaction. Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Water Fog, Carbon Dioxide, Dry Chemical or Foam.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

Carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear full protective clothing, including appropriate respiratory protection.

6.2 Environmental precautions:

Prevent from entering waterways.

6.3 Methods materials for containment and cleaning up:

Spills expected to be small quantities. Collect excess material with absorbents or wipe with dry towels. Wash with a dilute ammonia solution.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep containers cool, dry, and away from sources of ignition. Keep cartridges capped and sealed. Protect from freezing. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Country/Source	Component	Long-term exposure limit 8 hr TWA	Short-term exposure limit – 15 min
ECHA - DNEL	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/m ³	--
U.K. EH 40 WEL	All Isocyanates as NCO	0,02 mg/ m ³	0,07 mg/ m ³

Germany – AGS, DFG	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/ m ³	0,05 mg/ m ³
Germany – AGS, DFG	Polymeric diphenylmethane diisocyanate	0,05 mg/ m ³	0,05 mg/ m ³
France	4,4'-Diphenylmethane diisocyanate (MDI)	0,01 ppm	0,02 ppm
Spain	4,4'-Diphenylmethane diisocyanate (MDI)	0,052 mg/ m ³	--
Austria	4,4'-Diphenylmethane diisocyanate (MDI)	0,005 ppm	0,01 ppm
Belgium	4,4'-Diphenylmethane diisocyanate (MDI)	0,005 ppm	--
Denmark	4,4'-Diphenylmethane diisocyanate (MDI)	0,005 ppm	0,01 ppm
Hungary	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/ m ³	0,05 mg/ m ³
Ireland	All Isocyanates as NCO	0,02 mg/ m ³	0,07 mg/ m ³
Poland	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/ m ³	0,2 mg/ m ³
Sweden	4,4'-Diphenylmethane diisocyanate (MDI)	0,002 ppm	0,005 ppm
Australia OEL	All Isocyanates as NCO	0.02 mg/m ³	0.07 mg/m ³

Biological Limit Values (BLV): None established for this material or its components

8.2 Exposure controls

Respiratory protection:

Use with adequate ventilation to keep vapor concentration below acceptable limits. Product dispensed through a static mixer and used as directed emits less than 0.001 ppm MDI vapor as tested by OSHA 47. Ventilation is not required for standard use. If ventilation is not adequate, use approved chemical/mechanical filters designed to remove a combination of particulate and organic vapors in open and restricted areas (combination filter: ABEKP). Use approved airline type respirators or hoods in confined areas.

Hand protection (protective gloves):

Gloves made from Nitrile rubber (Material thickness >0,1 mm for short time contact) are recommended. Gloves should be replaced after each short time contact or contamination. In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374. Material thickness > 0,4 mm Perforation time > 480 minutes.

Eye protection:

Goggles which can be tightly sealed.

Skin protection (protective clothing):

Wear suitable protective clothing. Chemical resistant clothing made from nitrile rubber impregnated fabric is recommended. Remove and wash contaminated clothing before reuse. Discard contaminated shoes. Use protective cream if skin contact is likely.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties

Appearance:	Brown liquid
Odor threshold:	Faint, aromatic odor
pH:	Does not apply
Freezing point:	3°C
Boiling point:	200°C
Flash point:	220°C (open cup)
Evaporation rate:	Not available
Flammability (solid, gas):	Does not apply
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	0,00016 mm Hg @ 20°C
Vapor density (Air = 1):	1,22 g/cm ³
Specific gravity (H₂O = 1):	1,22 @ 25°C
Solubility in water:	Reacts
Partition coefficient: n-octanol/water:	Not available

Auto-ignition temperature:	> 250°C
Decomposition temperature:	Not available
Viscosity:	200 mPas @ 25°C

9.2 Other Information

Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. Stability and Reactivity

10.1 Reactivity:

Reacts with water, reacts with substances which contain active hydrogen.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid:

Avoid freezing, high temperatures, flame, high humidity and water contamination.

10.5 Incompatible materials :

Water, alcohols, amines, acids, alkalis, metal compounds.

10.6 Hazardous decomposition products:

Carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact with material or vapors may cause eye irritation.

Skin contact:

Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material. Allergic skin reaction symptoms include redness, swelling, blistering and itching.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes.

Inhalation (Breathing):

Material has low vapor pressure and inhalation hazard is expected to be minimal. Vapor exposure may cause irritation of the nose and throat. Symptoms may include burning sensation, coughing and shortness of breath, or other signs of respiratory distress. May cause allergic respiratory reaction below exposure guideline in susceptible individuals.

Ingestion:

Ingestion may cause irritation of the gastrointestinal tract.

Toxicity to Animals:

4,4'-Diphenylmethane diisocyanate (MDI):	LD ₅₀ (oral rat) >2.000 mg/kg
	LD ₅₀ (dermal rabbit) >9.400 mg/kg
	LC ₁₀ (inhl rat) 2,24 mg/m ³ , 1 hour, aerosol form

Aspiration Hazard:

No aspiration hazard expected.

Chronic Exposure:

Reproductive Toxicity: Not available.

Mutagenicity: Not available.

Teratogenicity:	Not available.
Specific Target Organ Toxicity (STOT)	Contains material which causes damage to the upper respiratory tract.
Toxicologically Synergistic Products:	Not available.
Carcinogenic Status:	This substance contains components identified as IARC Category 3, not classifiable.
Respiratory/Skin Sensitization	
	May cause sensitization by inhalation and skin contact..

12. Ecological Information

12.1 Toxicity:

Aquatic Toxicity:

4,4'-Diphenylmethane diisocyanate (MDI):	LC ₅₀ (96 hr): > 1000 mg/l Brachydanio rerio (fish) OECD Guideline 203 static
4,4'-Diphenylmethane diisocyanate (MDI):	EC ₅₀ (24 hr): > 1000 mg/l Daphnia magna (invertebrate) OECD Guideline 202, part 1 static
4,4'-Diphenylmethane diisocyanate (MDI):	EC ₅₀ (72 hr): 1640 mg/l Green algae (aquatic plants) OECD Guideline 201 static

12.2 Persistence and degradability:

Elimination information:
<10% BOD of the ThOD (28d)
(OECD Guideline 302 C, aerobic, activated sludge)
Under test conditions, poorly biodegradable.

12.3 Bioaccumulation potential:

Accumulation in organisms is not to be expected.

12.4 Mobility in soil:

Adsorption to solid soil phase is not expected

12.5 Results of PBT and vPvB Assessment:

This product is not, nor does it contain a substance that is a PBT or vPvB.

12.6 Other adverse effects:

None known.

13. Disposal Considerations

13.1 Waste Disposal

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.
Dispose of waste and residue in accordance with local authority requirements.
Waste code: 08 05 01 Waste isocyanates

14. Transport Information

UN Number:	Not Listed
UN Proper shipping name:	Not Applicable
Transport hazard class(es):	Not Applicable
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated

15. Regulatory Information

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

European Union

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list $\geq 0.1\%$ SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Meets labeling and kitting requirements found in Entry 56 of Annex XVII.

Australia

All components are listed on the AICS.

Contains 4,4'-Diphenylmethane diisocyanate (MDI) listed on the National Pollutant Inventory (NPI)

Hazardous according to criteria of NOHSC Australia.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:

OSHA = Occupational Safety and Health Administration

CLP = Classification, Labeling and Packaging Regulation

STOT = Specific Target Organ Toxicity

LD₅₀ = Median Lethal Dose

DNEL = Derived No Effect Level

ACGIH = American Conference of Governmental Industrial Hygienists

TSCA = Toxic Substances Control Act (USA)

DSL = Domestic Substances List (Canada)

AICS = Australian Inventory of Chemical Substances

Mixture classification according to Regulation (EC) No 1272/2008:

Classification Procedure

H332	Harmful if inhaled.	Calculation method.
H315	Causes skin irritation.	Calculation method.
H317	May cause an allergic skin reaction.	Calculation method.
H319	Causes serious eye irritation.	Calculation method.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	Calculation method.
H351	Suspected of causing cancer.	Calculation method.
H335	May cause respiratory irritation.	Calculation method.
H373	May cause damage to organs through prolonged or repeated inhalative exposure.	Calculation method.

Revision Date: August 9, 2017

Revision Number: 2 EU

Supersedes: October 5, 2015

Other: Not Applicable

Indication of Changes: Updated sections 1, 2, 8, 9, 16: new product codes, updated hazard and precaution phrases, new exposure data, formatting updates.
Written in accordance with the provisions of REACH Annex II (EU No 453/2010) and Australia WHS Regulation (2011). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

**Product Name: FST™ Foam Sealant
Burst Pack FST-BP (Part A)**

Product ID numbers: FSTBP-200KIT1, FSTBP-200KIT6;
FST-BP-XXX (where XXX is the package code.)

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Sealant, duct block; two-part material

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

Polywater Europe BV
Zuidhaven 9-11 Unit B2
4761 CR Zevenbergen
Netherlands
Tel: +31 (0)10 2330578
Email: sds@polywater.com

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

Local Contact Info

1.4 Emergency telephone numbers

INFOTRAC 1-800-535-5053 (USA) +1-352-323-3500 (International)

National Poison Information Centre (NVIC): +31(0)30 274 8888
(Professional use for acute poisoning only, Netherlands.)
Insert local poison control information here.

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to EU Regulation (EC) No 1272/2008 and Australia WHS Regulation (2011).

Acute Toxicity, Cat 4
Skin Irritation, Cat 2; H315
Eye Irritation, Cat 2; H319
Respiratory Sensitization, Cat 1; H334
Skin Sensitization, Cat 1; H317
Carcinogenicity, Cat 2; H351
Target Organ Toxicity (single exposure), Cat 3; H335
Target Organ Toxicity (repeated exposure), Cat 2; H373

2.2 Label elements

Contains: Polymeric diphenylmethane diisocyanate; 4,4'-Diphenylmethane diisocyanate (MDI)



Pictograms:

Signal word: Danger

Hazard Statements:
H332 Harmful if inhaled.

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H351 Suspected of causing cancer.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated inhalative exposure.

Supplemental Hazard Statement

- EUH304 Contains isocyanates. May produce an allergic reaction.

Precautionary Statements:

- P260 Do not breathe dust, vapor, or spray.
- P284 In case of inadequate ventilation wear respiratory protection.
- P280 Wear protective gloves, protective clothing and eye protection.
- P304 + P340 IF INHALED: Remove 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.
- P308 + P313 IF exposed or concerned: Get medical advice.

Notes:

4,4'-methylenediphenyl diisocyanate (MDI) has not been designated as a carcinogen by IARC, NTP, ACGIH, OSHA, or the United States EPA. There are inadequate human carcinogenicity data, and only limited animal data. Additionally, the IARC Working Group noted that tumorigenic effects observed in animals may be attributed to non-specific particle effect (IARC monograph 71). Monomeric MDI (CAS # 101-68-8) has an EU harmonized classification (Annex VI to CLP) including Carc 2 (H351), but we do not expect this product to pose a carcinogenic hazard if users avoid inhalation of vapor above exposure limits.

2.3 Other hazards:

Information according to XVII. 56 REACH

Persons already sensitized to diisocyanates 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. Pregnant women should absolutely avoid inhalation and skin contact.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>	<u>GHS/CLP Classification</u>
Polymeric diphenylmethane diisocyanate	9016-87-9		30 - 60	Acute Tox 4, Skin Irrit 2, Eye Irrit 2, Resp Sens1, STOT SE 3, STOT RE 2
4,4'-Diphenylmethane diisocyanate (MDI)	101-68-8	202-966-0	30 - 60	Acute Tox 4, Skin Sens 1, Skin Irrit 2, Eye Irrit 2, Resp Sens1, STOT SE 3, Carc 2, STOT RE 2

4. First Aid Measures

4.1 Description of first aid measures

- Eye Contact:** Immediately flush eyes with large quantity of water for 15 minutes. Seek medical attention.
- Skin Contact:** Remove contaminated clothing; flush skin thoroughly with soap and water. If irritation occurs, seek medical attention.
- Inhalation (Breathing):** If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention.
- Ingestion (Swallowing):** If swallowed, rinse mouth and drink plenty of water. Do not induce vomiting. If

patient is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person. Do not leave victim unattended. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause allergic skin and respiratory reaction. Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Water Fog, Carbon Dioxide, Dry Chemical or Foam.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

Carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be used to cool fire exposed container to prevent pressure build-up and possible auto-ignition or rupture.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear full protective clothing, including appropriate respiratory protection.

6.2 Environmental precautions:

Prevent from entering waterways.

6.3 Methods materials for containment and cleaning up:

Spills expected to be small quantities. Collect excess material with absorbents or wipe with dry towels. Wash with a dilute ammonia solution.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only.

7.2 Conditions for safe storage, including incompatibilities

Keep containers cool, dry, and away from sources of ignition. Keep cartridges capped and sealed. Protect from freezing. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Country/Source	Component	Long-term exposure limit 8 hr TWA	Short-term exposure limit – 15 min
ECHA - DNEL	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/m ³	--
U.K. EH 40 WEL	All Isocyanates as NCO	0,02 mg/ m ³	0,07 mg/ m ³

Germany – AGS, DFG	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/ m ³	0,05 mg/ m ³
Germany – AGS, DFG	Polymeric diphenylmethane diisocyanate	0,05 mg/ m ³	0,05 mg/ m ³
France	4,4'-Diphenylmethane diisocyanate (MDI)	0,01 ppm	0,02 ppm
Spain	4,4'-Diphenylmethane diisocyanate (MDI)	0,052 mg/ m ³	--
Austria	4,4'-Diphenylmethane diisocyanate (MDI)	0,005 ppm	0,01 ppm
Belgium	4,4'-Diphenylmethane diisocyanate (MDI)	0,005 ppm	--
Denmark	4,4'-Diphenylmethane diisocyanate (MDI)	0,005 ppm	0,01 ppm
Hungary	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/ m ³	0,05 mg/ m ³
Ireland	All Isocyanates as NCO	0,02 mg/ m ³	0,07 mg/ m ³
Poland	4,4'-Diphenylmethane diisocyanate (MDI)	0,05 mg/ m ³	0,2 mg/ m ³
Sweden	4,4'-Diphenylmethane diisocyanate (MDI)	0,002 ppm	0,005 ppm
Australia OEL	All Isocyanates as NCO	0.02 mg/m ³	0.07 mg/m ³

Biological Limit Values (BLV): None established for this material or its components

8.2 Exposure controls

Respiratory protection:

Use with adequate ventilation to keep vapor concentration below acceptable limits. Product dispensed through a static mixer and used as directed emits less than 0.001 ppm MDI vapor as tested by OSHA 47. Ventilation is not required for standard use. If ventilation is not adequate, use approved chemical/mechanical filters designed to remove a combination of particulate and organic vapors in open and restricted areas (combination filter: ABEKP). Use approved airline type respirators or hoods in confined areas.

Hand protection (protective gloves):

Gloves made from Nitrile rubber (Material thickness >0,1 mm for short time contact) are recommended. Gloves should be replaced after each short time contact or contamination. In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374. Material thickness > 0,4 mm Perforation time > 480 minutes.

Eye protection:

Goggles which can be tightly sealed.

Skin protection (protective clothing):

Wear suitable protective clothing. Chemical resistant clothing made from nitrile rubber impregnated fabric is recommended. Remove and wash contaminated clothing before reuse. Discard contaminated shoes. Use protective cream if skin contact is likely.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties

Appearance:	Brown liquid
Odor threshold:	Faint, aromatic odor
pH:	Does not apply
Freezing point:	3°C
Boiling point:	200°C
Flash point:	220°C (open cup)
Evaporation rate:	Not available
Flammability (solid, gas):	Does not apply
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	0,00016 mm Hg @ 20°C
Vapor density (Air = 1):	1,22 g/cm ³
Specific gravity (H₂O = 1):	1,22 @ 25°C
Solubility in water:	Reacts
Partition coefficient: n-octanol/water:	Not available

Auto-ignition temperature:	> 250°C
Decomposition temperature:	Not available
Viscosity:	200 mPas @ 25°C

9.2 Other Information

Volatiles (Weight %):	0%
VOC Content:	0 g/l

10. Stability and Reactivity

10.1 Reactivity:

Reacts with water, reacts with substances which contain active hydrogen.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid:

Avoid freezing, high temperatures, flame, high humidity and water contamination.

10.5 Incompatible materials :

Water, alcohols, amines, acids, alkalis, metal compounds.

10.6 Hazardous decomposition products:

Carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact with material or vapors may cause eye irritation.

Skin contact:

Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material. Allergic skin reaction symptoms include redness, swelling, blistering and itching.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes.

Inhalation (Breathing):

Material has low vapor pressure and inhalation hazard is expected to be minimal. Vapor exposure may cause irritation of the nose and throat. Symptoms may include burning sensation, coughing and shortness of breath, or other signs of respiratory distress. May cause allergic respiratory reaction below exposure guideline in susceptible individuals.

Ingestion:

Ingestion may cause irritation of the gastrointestinal tract.

Toxicity to Animals:

4,4'-Diphenylmethane diisocyanate (MDI):	LD ₅₀ (oral rat) >2.000 mg/kg
	LD ₅₀ (dermal rabbit) >9.400 mg/kg
	LC ₁₀ (inhl rat) 2,24 mg/m ³ , 1 hour, aerosol form

Aspiration Hazard:

No aspiration hazard expected.

Chronic Exposure:

Reproductive Toxicity: Not available.

Mutagenicity: Not available.

Teratogenicity:	Not available.
Specific Target Organ Toxicity (STOT)	Contains material which causes damage to the upper respiratory tract.
Toxicologically Synergistic Products:	Not available.
Carcinogenic Status:	This substance contains components identified as IARC Category 3, not classifiable.
Respiratory/Skin Sensitization	
	May cause sensitization by inhalation and skin contact..

12. Ecological Information

12.1 Toxicity:

Aquatic Toxicity:

4,4'-Diphenylmethane diisocyanate (MDI):	LC ₅₀ (96 hr): > 1000 mg/l Brachydanio rerio (fish) OECD Guideline 203 static
4,4'-Diphenylmethane diisocyanate (MDI):	EC ₅₀ (24 hr): > 1000 mg/l Daphnia magna (invertebrate) OECD Guideline 202, part 1 static
4,4'-Diphenylmethane diisocyanate (MDI):	EC ₅₀ (72 hr): 1640 mg/l Green algae (aquatic plants) OECD Guideline 201 static

12.2 Persistence and degradability:

Elimination information:
<10% BOD of the ThOD (28d)
(OECD Guideline 302 C, aerobic, activated sludge)
Under test conditions, poorly biodegradable.

12.3 Bioaccumulation potential:

Accumulation in organisms is not to be expected.

12.4 Mobility in soil:

Adsorption to solid soil phase is not expected

12.5 Results of PBT and vPvB Assessment:

This product is not, nor does it contain a substance that is a PBT or vPvB.

12.6 Other adverse effects:

None known.

13. Disposal Considerations

13.1 Waste Disposal

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.
Dispose of waste and residue in accordance with local authority requirements.
Waste code: 08 05 01 Waste isocyanates

14. Transport Information

UN Number:	Not Listed
UN Proper shipping name:	Not Applicable
Transport hazard class(es):	Not Applicable
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated

15. Regulatory Information

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

European Union

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list $\geq 0.1\%$ SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Meets labeling and kitting requirements found in Entry 56 of Annex XVII.

Australia

All components are listed on the AICS.

Contains 4,4'-Diphenylmethane diisocyanate (MDI) listed on the National Pollutant Inventory (NPI) Hazardous according to criteria of NOHSC Australia.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information

Abbreviations and acronyms:

OSHA = Occupational Safety and Health Administration
CLP = Classification, Labeling and Packaging Regulation
STOT = Specific Target Organ Toxicity
LD₅₀ = Median Lethal Dose
DNEL = Derived No Effect Level
ACGIH = American Conference of Governmental Industrial Hygienists
TSCA = Toxic Substances Control Act (USA)
DSL = Domestic Substances List (Canada)
AICS = Australian Inventory of Chemical Substances

Mixture classification according to Regulation (EC) No 1272/2008:

Classification Procedure

H332	Harmful if inhaled.	Calculation method.
H315	Causes skin irritation.	Calculation method.
H317	May cause an allergic skin reaction.	Calculation method.
H319	Causes serious eye irritation.	Calculation method.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	Calculation method.
H351	Suspected of causing cancer.	Calculation method.
H335	May cause respiratory irritation.	Calculation method.
H373	May cause damage to organs through prolonged or repeated inhalative exposure.	Calculation method.

Revision Date:	August 9, 2017
Revision Number:	2 EU
Supersedes:	October 5, 2015
Other:	Not Applicable
Indication of Changes:	Updated sections 1, 2, 8, 9, 16: new product codes, updated hazard and precaution phrases, new exposure data, formatting updates. Written in accordance with the provisions of REACH Annex II (EU No 453/2010) and Australia WHS Regulation (2011). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.

SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company

1.1 Product identifier

Product Name:
Type HP™ Cleaner/Degreaser
Saturated Towel/Wipe Package

Product ID numbers: HP-1, HP-P158ID, HP-D72, HP-D400UK, HP-P63

1.2 Relevant identified uses of the mixture and uses advised against

Identified uses: Electrical cleaning

List of advices against: Not applicable.

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:

Polywater Europe BV
Zuidhaven 9-11 Unit B2
4761 CR Zevenbergen
Netherlands
Tel: +31 (0)10 2330578
Email: sds@ polywater.com

American Polywater Corporation
11222 - 60th Street North
Stillwater, MN 55082 USA
Tel: 1-651-430-2270
Email: sds@polywater.com

Local Contact Info

1.4 Emergency telephone numbers

INFOTRAC: 1-800-535-5053 (USA) 1-352-323-3500 (INT'L)

National Poison Information Centre (NVIC): +31(0)30 274 8888
(Professional use for acute poisoning only, Netherlands.)
Insert local poison control information here.

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to EU Regulation (EC) No 1272/2008 and Australia WHS Regulation (2011).

Skin Sens 1 H317

Aquatic Chronic 2 H411

2.2 Label elements

Contains: Petroleum distillates, hydrotreated light; d-Limonene



Pictograms:

Signal word: Warning

Hazard Statements:

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P261 Avoid breathing fumes.

P273 Avoid release to the environment.

P280 Wear protective gloves.
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P333 + P313 If skin irritation or rash occurs: Get medical advice.
 P501 Dispose of contents/container in accordance with local and national regulations.

Notes: Aspiration classification not applied due to the physical form of the product.

2.3 Other hazards: No information available.

3. Composition/Information on Ingredients

<u>Component</u>	<u>CAS #</u>	<u>EC #</u>	<u>Wt. %</u>	<u>GHS/CLP Classification</u>
Petroleum distillates, hydrotreated light	64742-47-8	265-149-8	< 100	Asp. Tox. 1 H304; EUH066 Skin Irrit. 3 H316
d-Limonene	5989-27-5	227-813-5	< 10	Flam Liq 3, H226 Skin Irrit 2, H315 Skin Sens 1, H317 Aquatic Chronic 1, H410 Aquatic Acute 1, H400

4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: If eye irritation from exposure to vapors develops, move to fresh air. Flush eyes with clean water. If irritation persists, seek medical attention. For direct eye contact, flush with large quantity of water for 15 minutes. Seek medical attention.

Skin Contact: Remove contaminated clothing; flush skin thoroughly with water. If irritation occurs, seek medical attention.

Inhalation (Breathing): If irritation of nose or throat develops, move to fresh air. If irritation persists, seek medical attention. If breathing is difficult, provide oxygen. If not breathing, give artificial respiration. Seek immediate medical attention.

Ingestion (Swallowing): Do not induce vomiting or give anything by mouth. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 for more information.

4.3 Indication of immediate medical attention and special treatment needed.

No information available.

5. Firefighting Measures

5.1 Extinguishing media:

Carbon dioxide, water fog, dry chemical or foam.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition and by-products:

Burning generates CO, CO₂ and smoke. Smoke may be acrid and fumes irritating.

5.3 Advice for firefighters

Wear full protective clothing, including self-contained, positive pressure or pressure-demand breathing apparatus. Sealed container can build up pressure when exposed to high heat. Use water spray to cool fire exposed containers.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Limited spill hazard with saturated towel package.

6.2 Environmental precautions:

Avoid release to the environment.

6.3 Methods materials for containment and cleaning up:

Collect towel and absorb any excess material with sand or absorbents.

6.4 Reference to other sections:

Refer to Sections 4, 5, 8, and 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing vapors or spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. For industrial or professional use only. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2 Conditions for safe storage, including incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store away from acids and oxidizing agents.

7.3 Specific end uses

See technical data sheet on this product for further information.

8. Exposure Controls / Personal Protection

8.1 Control parameters

Exposure limits and recommendations:

Petroleum Distillates, hydrotreated light (64742-47-8)

Country/Source	Long-term exposure limit – 8 hr TWA	Short-term exposure limit – 15 min
Manufacturer, RCP* TWA	1200 mg/m ³	--
Germany DFG**	350 mg/m ³ (vapor); 5 mg/m ³ (airborne particles)	700 mg/m ³ (vapor) 20 mg/m ³ (airborne particles)
Australia	Not established	Not established
USA, ACGIH TWA	Not established	Not established
USA, OSHA PEL	2000 mg/m ³ , 500 ppm (as petroleum distillates (naphtha))	--

D-Limonene (5989-27-5)

Country/Source	Long-term exposure limit – 8 hr TWA	Short-term exposure limit – 15 min
Germany DFG**	28 mg/m ³	112 mg/m ³
Germany AFS	28 mg/m ³	110 mg/m ³
Finland	140 mg/m ³	280 mg/m ³
Switzerland	110 mg/m ³	220 mg/m ³ (short term)
Norway***	140 mg/m ³	--
Australia	Not established	Not established
USA, ACGIH TWA	Not established	Not established
USA, OSHA PEL	Not established	Not established

*reciprocal calculation procedure for total hydrocarbons

**Deutsche forschungsgemeinschaft, German Research Foundation

***Norwegian regulations on Measures and Limit Values for Physical and Chemical Factors in the Work Environment and Infection Risk Group for Biological Agents

8.2 Exposure controls

Respiratory protection:

Normal ventilation is adequate. Towelette limits solvent vapor exposure. If exposure exceeds recommended limits, respirator protection is recommended. Use a respirator or gas mask with cartridges for organic vapors (NIOSH or CE approved) with particulate pre-filter, P100 or AP2.

Protective gloves:

For repeated or prolonged skin contact, the use of impermeable gloves is recommended to prevent drying and possible irritation.

Suggested Material: Nitrile Rubber

Suggested Thickness: For short term contact (<15 minutes), splashes use 0.2 mm. For full contact use 0.4 mm

Nitrile, minimum 0.38 mm thickness or comparable protective barrier material with a high performance level for continuous contact use conditions, permeation breakthrough minimum 480 minutes in accordance with CEN standards EN 420 and EN 374.

Eye protection:

None necessary. Wipe package eliminates splash hazard. Do not allow wipe/towel to directly contact eyes.

Other protective equipment:

It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. Physical and Chemical

9.1 Information of basic physical and chemical properties (bulk liquid)

Appearance:	Clear, colorless liquid with a very light citrus scent.
Odor threshold:	Not available
pH:	Does not apply
Freezing point:	<-50°C
Boiling point:	185°C Initial
Flash point:	>60,5°C Closed Cup (PMCC)
Evaporation rate:	<0,1 (n-butyl acetate = 1)
Flammability (solid, gas):	Not applicable to liquids
Upper/lower flammability or explosive limits:	LEL = 0,7% UEL = 6,1%-7,0%
Vapor pressure:	< 134 Pa @ 20°C
Vapor density (Air = 1):	> 1,0
Specific gravity (H₂O = 1):	0,79
Solubility in water:	Nil
Partition coefficient: n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

9.2 Other Information

Volatiles (Weight %):	100%
VOC Content:	790 g/l

10. Stability and Reactivity

10.1 Reactivity:

See remaining headings in Section 10.

10.2 Chemical stability:

Stable

10.3 Possibility of hazardous reactions:

None known.

10.4 Conditions to avoid:

Avoid heat, flame, and sparks.

10.5 Incompatible materials :

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Carbon dioxide, carbon monoxide.

11. Toxicological Information

11.1 Information on toxicological effects:

Acute toxicity

Eye contact:

Direct eye contact may cause eye irritation. This irritation is minimal and expected to be transient.

Skin contact:

Prolonged or repeated skin exposure can remove oils, causing redness, drying and cracking. Persons with pre-existing skin disorders may be more susceptible to skin irritation from this material.

Irritation and Sensitization Potential:

Product may be irritating to skin and eyes. It may cause an allergic skin reaction.

Inhalation (Breathing):

Concentrated petroleum solvent vapors may cause irritation of the nose and throat. Prolonged exposure to excessively high vapor concentrations can result in central nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). Persons with impaired lung function may experience additional breathing difficulties due to the irritant properties of this material.

Ingestion:

Ingestion of large quantities may cause irritation of the digestive tract, nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).

Toxicity to Animals:

Petroleum distillates, hydrotreated light:	LD ₅₀ (oral rat) >5000 mg/kg
	LD ₅₀ (dermal rabbit) >2000 mg/kg
	LC ₅₀ (inhl rat) >4.3mg/L, 4 hours
d-Limonene:	LD ₅₀ (oral rat) >5000 mg/kg
	LD ₅₀ (dermal rabbit) 5000 mg/kg
	RD ₅₀ 1000 ppm

Aspiration hazard

Liquid solvent has an aspiration hazard. This route of exposure is not expected for towelette form.

Chronic Exposure:

Reproductive Toxicity: Not available.

Mutagenicity: Not available.

Teratogenicity: Not available.

Specific Target Organ Toxicity (STOT) No end point data.

Toxicologically Synergistic Products: Not available.

Carcinogenic Status: This substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.

12. Ecological Information**12.1 Toxicity:****Ecotoxicity:** No information available.**Aquatic Toxicity:** No information available.**12.2 Persistence and degradability:** Expected to be biodegradable.**12.3 Bioaccumulation potential:** No information available**12.4 Mobility in soil:** No information available.**12.5 Results of PBT and vPvB Assessment:** This product is not, nor does it contain a substance that is a PBT or vPvB.**12.6 Other adverse effects:** None known.**13. Disposal Considerations**

Dispose of product in accordance with National and Local Regulations.

14. Transport Information

UN Number:	Not Listed
UN Proper shipping name:	Not Applicable
Transport hazard class(es):	Not Applicable
Packing group:	Not Applicable
Environmental hazards:	None known
Special precautions:	None known
TDG:	Not Regulated
ICAO/IATA-DGR:	Not Regulated
IMDG:	Not Regulated
ADR/RID:	Not Regulated

15. Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****European Union**

Product complies with the communication requirements of REACH Regulation (EC) No. 1907/2006. All components are listed on the European Inventory of Existing Chemical Substances (EINECS). Contains no substance on the REACH candidate list $\geq 0.1\%$ SCL. Does not contain notified substances from the ELINCS List, Directive 92/32/EEC. Contains no REACH substances with Annex XVII restrictions.

Australia

All components are listed on the AICS.
Hazardous according to criteria of NOHSC Australia.

USA Federal and State

All components are listed on the TSCA inventory.

Canada

All components are listed on the DSL inventory.
This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for the mixture by the supplier.

16. Other Information**Abbreviations and acronyms:**

OSHA = Occupational Safety and Health Administration

CLP = Classification, Labeling and Packaging Regulation

STOT = Specific Target Organ Toxicity

LD₅₀ = Median Lethal Dose

DNEL = Derived No Effect Level

ACGIH = American Conference of Governmental Industrial Hygienists

TSCA = Toxic Substances Control Act (USA)

DSL = Domestic Substances List (Canada)

AICS = Australian Inventory of Chemical Substances

Mixture classification according to Regulation (EC) No 1272/2008:

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Classification Procedure

Calculation method.

Calculation method.

Revision Date: October 25, 2016**Revision Number:** 6 EU**Supersedes:** January 2, 2015**Locale:** --**Indication of Changes:** Section 1, 2, 3, 8, 9, 15, 16 updated information and formatted for Europe. Written in accordance with the provisions of REACH Annex II (EU No 453/2010) and Australia WHS Regulation (2011). (GHS format)

The information and recommendations contained herein are believed to be reliable. However, the supplier makes no warranties, express or implied, concerning the use of this product. The buyer must determine conditions of safe usage and assumes all risk and liability in handling this product.