

Aquaseal FD Repair Adhesive

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 10/01/2019

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Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Aquaseal FD Repair Adhesive

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

Recommended use : Adhesive

1.3. Details of the supplier of the safety data sheet

Manufacturer

Gear Aid Inc.
1411 Meador Avenue
Bellingham, WA 98229-5845
T (360) 671-2227

1.4. Emergency telephone number

Emergency number : CHEM TEL: 1-800-255-3924 (24hr)
Outside the US: 813-248-0585 (collect call)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS classification

Flam. Liq. 2
Acute Tox. 4 (Inhalation:vapour)
Skin Irrit. 2
Eye Irrit. 2A
Resp. Sens. 1
Skin Sens. 1
Carc. 2
Repr. 2 (Developmental)
STOT SE 3
STOT SE 3
STOT RE 2

2.2. Label elements

GHS labelling

Hazard pictograms (GHS)



Signal word (GHS)

: Danger

Hazard statements (GHS)

: Highly flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS)

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before

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reuse. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
4,4'-Methylenediphenyl diisocyanate	(CAS-No.) 101-68-8	80 - 100
Toluene	(CAS-No.) 108-88-3	10 - 30

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash clothing before re-using. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.
- Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
- Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Powder. Sand. Water spray.
- Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour. Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen. Hydrogen cyanide.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove all sources of ignition. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Provide ventilation. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, mist, spray, vapours. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands before eating, drinking, or smoking. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Keep away from heat, flames and sparks. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4,4'-Methylenediphenyl diisocyanate (101-68-8)		
ACGIH	ACGIH TWA (ppm)	0.005 ppm (Methylene bisphenyl isocyanate (MDI))
OSHA	OSHA PEL (Ceiling) (mg/m ³)	0.2 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm
IDLH	US IDLH (mg/m ³)	75 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	0.005 ppm (Methylene bisphenyl isocyanate)
NIOSH	NIOSH REL (ceiling) (mg/m ³)	0.2 mg/m ³
NIOSH	NIOSH REL (ceiling) (ppm)	0.02 ppm
Toluene (108-88-3)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Visual impair; female repro;
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm
OSHA	Remark (OSHA)	(2) See Table Z-2.

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Toluene (108-88-3)		
IDLH	US IDLH (ppm)	500 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	375 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	560 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	150 ppm

8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	: Wear suitable gloves resistant to chemical penetration.
Eye protection	: Wear eye/face protection.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds. Avoid release to the environment.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear. Viscous.
Colour	: Colourless
Odour	: Aromatic
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 115 °C (239 °F)
Flash point	: 20 °C (68 °F)
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: 29 hPa @ 20 °C (68 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: 1 g/cm ³ @ 20 °C (68 °F)
Solubility	: Not miscible or difficult to mix.
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: 520 °C (968 °F)
Decomposition temperature	: No data available
Viscosity, kinematic	: 60 000 cSt
Viscosity, dynamic	: 60 000 cP at 20 °C (68 °F)
Explosive limits	: Lower: 0.4 Vol % Upper: 7.0 Vol %
Explosive properties	: Not explosive. Formation of explosive air/vapour mixtures are possible.
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

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10.2. Chemical stability

Stable under normal conditions. May form flammable/explosive vapour-air mixture. Keep cool.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition. Moisture. Direct sunlight.

10.5. Incompatible materials

Oxidizing agent. Acids. Alkalis. Catalysts.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Oxides of nitrogen. Hydrogen cyanide. poisonous gases or vapors. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Harmful if inhaled.

ATE CA (vapours)	11 mg/l/4h
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4,4'-Methylenediphenyl diisocyanate (101-68-8)

LD50 oral rat	31600 mg/kg
LC50 inhalation rat	369 mg/m ³ (Exposure time: 4 h)
ATE CA (oral)	31600 mg/kg bodyweight
ATE CA (Gases)	100 ppmv/4h
ATE CA (vapours)	11 mg/l/4h
ATE CA (dust,mist)	0.369 mg/l/4h

Toluene (108-88-3)

LD50 oral rat	2600 mg/kg
LD50 oral	5000 mg/kg
LD50 dermal rabbit	12000 mg/kg
LC50 inhalation rat	12.5 mg/l/4h
ATE CA (oral)	2600 mg/kg bodyweight
ATE CA (Dermal)	12000 mg/kg bodyweight
ATE CA (Gases)	4500 ppmv/4h
ATE CA (vapours)	12.5 mg/l/4h
ATE CA (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Suspected of causing cancer.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

IARC group	3 - Not classifiable
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Toluene (108-88-3)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Suspected of damaging the unborn child.
STOT-single exposure	: May cause respiratory irritation. May cause drowsiness or dizziness.

4,4'-Methylenediphenyl diisocyanate (101-68-8)

STOT-single exposure	May cause respiratory irritation.
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Toluene (108-88-3)

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

4,4'-Methylenediphenyl diisocyanate (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Toluene (108-88-3)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified.

Aquaseal FD Repair Adhesive	
Viscosity, kinematic (calculated value) (40 °C)	6250 mm ² /s

Symptoms/effects after inhalation : Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life.

Toluene (108-88-3)	
LC50 fish 1	15.22 - 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	5.46 - 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
NOEC chronic crustacea	0.74 mg/l

12.2. Persistence and degradability

Aquaseal FD Repair Adhesive	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Aquaseal FD Repair Adhesive	
Bioaccumulative potential	Not established.

Toluene (108-88-3)	
Partition coefficient n-octanol/water	2.7

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Handle empty containers with care because residual vapours are flammable.

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SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

UN-No.(DOT/TDG) : UN1133
Proper Shipping Name (DOT/TDG) : Adhesives
Class (DOT/TDG) : Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT/TDG) : II
Hazard labels (DOT/TDG) :



Transport by sea

In accordance with IMDG

UN-No. (IMDG) : 1133
Proper Shipping Name (IMDG) : ADHESIVES
Class (IMDG) : Flammable liquids
Packing group (IMDG) : II
Danger labels (IMDG) :



Transport by air

In accordance with IATA

UN-No. (IATA) : 1133
Proper Shipping Name (IATA) : Adhesives
Class (IATA) : Flammable Liquids
Packing group (IATA) : II
Hazard labels (IATA) :



SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

15.3. US State regulations

⚠ WARNING: This product can expose you to Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Revision date : 05/08/2020
Other information : None.

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