



MARLIG INDUSTRIES, INC.

3308 Fairway Road, Niagara Falls, Ontario, Canada L2J 3R6 (905) 374-2560

U.S.A. Mailing Address: PO Box 117, L.P.O., Niagara Falls, New York 14304 Fax: (905) 356-6807

MATERIAL SAFETY DATA SHEET 2015

PRODUCT INFORMATION:

Manufacturer: Marlig Industries Inc.
 Address: 3308 Fairway Rd
 Niagara Falls, ON. Canada L2J 3R6

Emergency Phone Number: 905-374-2560
 Trade Name: Fix A Leak

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Fix A Leak
 Product description: A 3,22 weight ratio Fix A Leak, 37.5% solution in water
 Product Use: Leak sealer for swimming pools, spas and hot tubs.
 Manufacturer: Marlig Industries
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical & Common Name	CAS Registry Number	Wt. %	OSHA PEL	ACGIH TLV
Water	7732-18-5	62.5%	Not Established	Not Established
Silicic acid, Sodium salt: Sodium Silicate	1344-09-8	37.5%	Not Established	Not Established
Cellulose	9004-36-6		Not Established	Not Established

3. HAZARDS IDENTIFICATION

Emergency Overview: Clear to hazy, colorless, odorless, thick liquid. Causes eye, skin and Digestive tract irritation. Spray mist causes irritation to respiratory tract. Due to high pH of product, release into surface water is harmful to aquatic life. Non-combustible. Spills are slippery. Reacts with acids, ammonium salts, reactive metals and some organics.



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Eye contact:	Causes moderate irritation to the eyes.
Skin contact:	Causes moderate irritation to the skin.
Inhalation:	Spray mist is irritating to respiratory system.
Ingestion:	May cause irritation to mouth, esophagus, and stomach.
Chronic hazards:	No known chronic hazard. Not listed by NTP, IARC or OSHA as a Carcinogen
Physical hazards:	Dries to form glass film which can easily cut skin. Spilled material is very Slippery. Can etch glass if not promptly removed.

4. First Aid Measures

Eye:	In case of splashing into eyes, immediately flush eyes with clean water for at least 15 minutes. If irritation persists get medical attention.
Skin:	In case of contact with skin, wash with warm water and soap. In contact with clothing or shoes remove and wash.
Inhalation:	Material is odourless, open container in adequate ventilation.
Ingestion:	If swallowed, do not induce vomiting. Get medical attention immediately. If victim is fully conscious, give a cupful of water.

5. Fire Fighting Measures

Flammable limits:	This material is non-combustible.
Extinguishing Media:	This material is compatible with all extinguishing media.
Hazards to fire-fighters:	See section 3 for more information on hazards when this material is present in the area of fire.
Fire-fighting equipment:	The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: chemical goggles, body covering protective clothing, chemical resistant gloves, and rubber boots.
Hazardous Combustion Products:	Not available
Explosion data	
Sensitivity to mechanical impact and static discharge:	Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal protection:	Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. See section 8.
Environmental Hazards:	Sinks and mixes with water. High pH of this material is harmful to aquatic life, see section 12. Only water will evaporate from a spill of this material.



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- Small spill cleanup: Mop up and neutralize liquid, dispose in accordance with federal, provincial and local regulations or permits.
- Large spill cleanup: Keep unnecessary people away, isolate hazard area and deny entry. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent runoff from entering into storm sewers and ditches which lead to natural waterways. Isolate, dike and store discharged material, if possible. Use sand or earth to contain spilled material. If containment is impossible, neutralize contaminated area and flush with large quantities of water.
- CERCLA RQ (US): There is no CERCLA Reportable Quantity for this material. If a spill goes Site, notification of state and local authorities is recommended.

7. HANDLING AND STORAGE

- Handling: Avoid contact with eyes, skin and clothing. Avoid breathing spray mist, Keep container closed. Promptly clean residue from closures with cloth dampened with water. Promptly clean up spills.
- Storage: Keep containers closed. Store in clean steel or plastic containers. Separate from acids, reactive metals, and ammonium salts. Storage temperature 0-95C. Loading temperature 45-95C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls: Use with adequate ventilation. Keep containers closed. Safety shower And eyewash fountain should be within direct access.
- Respiratory protection: Use a NIOSH-approved dust and mist respirator where spray mist Occurs. Observe Provincial regulations for respirator use.
- Skin protection: Wear body-covering protective clothing and gloves.
- Eye protection: Wear chemical goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Thick liquid.
- Color: Clear to hazy white.
- Odor: Odorless
- Odor threshold: Not applicable
- pH: Approximately 11.3
- Specific gravity: 1.39 g/cm (20C). 41 Be, 11.62 lbs/gal
- Solubility in water: Miscible.
- Flashpoint: Not applicable.
- Auto-ignition temperature: Not applicable.



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Vapor pressure: Not applicable.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Boiling point: Not applicable.
Freezing point: Not applicable.
Coefficient of water
/oil distribution: Not applicable.

10. STABILITY AND REACTIVITY

Stability: This material is stable under all conditions of use and storage.
Conditions to avoid: None.
Materials to avoid: Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead and zinc.

Hazardous decomposition
Products: Hydrogen.

11. TOXICOLOGICAL INFORMATION

Acute Data: Eye and skin irritation potential, a similar material
Caused moderate irritation to the eyes and moderate irritation to the skin. Human experience indicates that skin irritation occurs, particularly, when on clothes at the collar, cuffs or other areas where abrasion may occur.

The acute oral toxicity of this product has not been tested. When Fix A Leak was tested on 100% solids basis, their single does acute oral LD50 in rats ranged from 1500mg/kg to 3200 mg/kg. The acute oral lethality resulted from nonspecific causes.

Subchronic Data: In a study of rats fed Fix A Leak in drinking water for three months. At 200, 600 and 1800 ppm, changes were reported in blood chemistry of some animals, but no specific changes to the organs of the animals due to Fix A Leak administration were observed in any of the dosage groups.

Special Studies: Mutagenicity: Fix A Leak was not mutagenic to the bacterium E.Coli when tested in a mutagenicity bioassay.
Carcinogenicity: there are no known reports of carcinogenicity of Fix A Leak. Fix A Leak is not listed by IARC, NTP or OSHA as a carcinogen.
Sensitization to product: Not applicable
Reproductive toxicity: Not applicable
Teratogenicity: Not applicable
Name of toxicologically synergistic products: Not applicable.



12. ECOLOGICAL INFORMATION

- Eco toxicity: The following data is reported for Fix A Leak on a 100% solids basis: A 96 hour median tolerance for dish of 2320ppm; a 96 hour median tolerance for water fleas of 247 ppm; a 96 hour median tolerance for snail eggs of 632ppm; and a 96 hour median tolerance for amphipod of 160 ppm.
- Environmental Fate: This material is not persistent in aquatic systems, but it's high pH when Undiluted or unneutralized is acutely harmful to aquatic life. Diluted Material rapidly depolymerized to yield dissolved silica in a form that is Indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Where abnormally low natural silica concentrations exist, dissolved Silica may be a limiting nutrient for diatoms and a few other aquatic Algal species. However, the addition of excess dissolved silica over the limiting concentration will not stimulate the growth of diatom populations; their growth rate is independent of silica concentration once the limiting concentration is exceeded. Neither silica's nor sodium will appreciably bio concentrate up the food chain.
- Physical/Chemical: Sinks and mixes with water. Only water will evaporate from this Material.

13. DISPOSAL CONSIDERATIONS

- Disposal Method: Dispose in accordance with federal, provincial and local regulations.

14. TRANSPORT INFORMATION

- TDG UN Status: This material is not regulated hazardous material for transportation.

15. REGULATORY INFORMATION

- WHMIS (Canada) Class D2B
This product had been classified in accordance with the hazard criteria Of the Controlled Products Regulations and MSDS contains all the Information required by the Controlled Products Regulations.
- DSL (Canada): All components of this formulation are listed on the CEPA-DSL
CERCLA (US): No CERCLA Reportable Quantity has been established for this Material.
- SARA TITLE III (US): Not an Extremely Hazardous Substance under 302. Not a toxic



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TSCA (US): Chemical under 313. Hazard Categories under 311/312:
All ingredients of this material are listed on the TSCA inventory.

16. OTHER INFORMATION

Prepared by: Fix A Leak Dept.

The information of this safety data sheet is believed to be accurate and it is the best information available to Marlig Industries. This document is intended only as a guide to the appropriate precautions for handling a chemical by a person trained in chemical handling. Marlig Industries makes no warranty of merchant ability or any other warranty. Express or implied with respect to such information or the product to which it relates and we assume no liability resulting from the use or handling of the product to which this safety date sheet relates. Users and handlers of this product should make their own investigations to determine the suitability of the information provided herein for their own purposes.