

Material Safety Data Sheet

JoiFix Medium (55% VOC)

1. Identification of the material and supplier

Names

Product name : JoiFix Medium (55% VOC)
Distributor : SABRE CORPORATION
75 South Creek Road
Dee Why, NSW 2099
Australia
Phone: 02-9982-0100
Manufacturer : Zotos International, INC
100 Tokeneke Road,
Darien, CT 06820
www.zotos.com
Emergency telephone number : 131126

2. Hazards identification

Classification : R10
Risk phrases : R10- Flammable.
Safety phrases : S2- Keep out of the reach of children.
S46- If swallowed, seek medical advice immediately and show this container or label.
Statement of hazardous/dangerous nature : NON-HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Additional information on toxicological endpoints is available from the supplier upon request

3. Composition/information on ingredients

Mixture : Yes.

Ingredient name	CAS number	Concentration
ethanol	64-17-5	54.78
(R)-p-mentha-1,8-diene	5989-27-5	0.00

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

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

4. First aid measures

First aid measures

Inhalation : Move affected person to fresh air.
Ingestion : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED. Treat symptomatically. Never give anything by mouth to an unconscious person. Call a physician.
Skin contact : Remove contaminated clothing and shoes. Wash with plenty of soap and water.
Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Advice to doctor : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Extinguishing media** : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- Special exposure hazards** : Flammable liquid. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.
- Special protective equipment for fire-fighters** : Immediately contact emergency personnel. Flammable material. In case of insufficient ventilation, wear suitable respiratory equipment.
- Hazchem code** : •3Y

6. Accidental release measures

- Personal precautions** : Flammable. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Do not get in eyes. Keep out of reach of children.
- Environmental precautions** : Leaking packages should be placed in open containers outdoors away from any source of ignition
- Methods for cleaning up** : Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Place spilled material in an appropriate container for disposal. After contact with skin, wash immediately with plenty of water.

7. Handling and storage

- Handling** : Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use only in well-ventilated areas. Avoid contact with ignition and heat sources and oxidizers. Do not spray on an open flame or other ignition source. Keep out of reach of children.
- Storage** : Avoid increased storage temperature. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Avoid contact with ignition and heat sources and oxidizers. Store away from oxidizing agents. Store in cool/well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	Safe Work Australia (Australia, 8/2005). TWA: 1880 mg/m ³ 8 hour(s). TWA: 1000 ppm 8 hour(s).
(R)-p-mentha-1,8-diene	TRGS900 AGW (Germany, 1/2012). Skin sensitizer. PEAK: 40 ppm 15 minute(s). PEAK: 220 mg/m ³ 15 minute(s). TWA: 20 ppm 8 hour(s). TWA: 110 mg/m ³ 8 hour(s).

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Exposure controls

- Engineering measures** : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures** : When using do not eat, drink or smoke.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Respiratory** : Chemical splash goggles. Protective clothing must be worn.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Color	: Colorless to light yellow.
Odor	: Characteristic. Fragrance-like.
Boiling point	: 78.333°C (173°F)
Relative density	: 0.986 to 1
Flash point	: Closed cup: 23 to 37.8°C (73.4 to 100°F)
pH	: 4.5 to 5.5
Flame duration	: Not applicable.

10. Stability and reactivity

Chemical stability	: Stable under recommended storage and handling conditions (see section 7).
Possibility of hazardous reactions	: Not available.
Conditions to avoid	: Store away from oxidizing agents. Avoid contact with ignition and heat sources. Keep away from direct sunlight.
Materials to avoid	: Separate from oxidizing materials.
Hazardous decomposition products	: Products of combustion

11. Toxicological information

Potential acute health effects

Inhalation	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: May cause skin irritation.
Eye contact	: May cause eye irritation.

Acute toxicity

Product/ingredient name	Result	Dose	Exposure
ethanol	LC50 Inhalation Vapor LD50 Oral	124700 mg/m ³ 7 g/kg	4 hours -
(R)-p-mentha-1,8-diene	LD50 Dermal LD50 Oral	>5000 mg/kg 4400 mg/kg	- -

Conclusion/Summary : Not available.

Potential chronic health effects

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Score	Exposure	Observation
ethanol	Eyes - Mild irritant	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	-	100 microliters	-
	Eyes - Severe irritant	-	500 milligrams	-
	Skin - Mild irritant	-	400 milligrams	-
	Skin - Moderate irritant	-	24 hours 20 milligrams	-
(R)-p-mentha-1,8-diene	Skin - Mild irritant	-	24 hours 10 Percent	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

11. Toxicological information

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : No specific data.

Eyes : No specific data.

Target organs : Contains material which may cause damage to the following organs: the nervous system, liver, upper respiratory tract, central nervous system (CNS).

12. Ecological information

THE FOLLOWING DATA IN THIS SECTION IS SOURCED FROM PUBLICLY AVAILABLE DATABASES AND NOT THE REPRESENTATION OF ANY DATA COLLECTED BY ZOTOS INTERNATIONAL OR ITS AFFILIATES.

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/L Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 ug/L Marine water	Crustaceans - Artemia franchiscana - Larvae	48 hours
	Acute LC50 42000 ug/L Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae - 3 days	12 weeks
	(R)-p-mentha-1,8-diene	Acute EC50 421 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours
	Acute EC50 688 ug/L Fresh water	Fish - Pimephales promelas - 34 days - 19.1 mm - 0.085 g	96 hours

Conclusion/Summary : Not available.

Other ecological information

Persistence/degradability

Conclusion/Summary : Not available.

Bioaccumulative potential



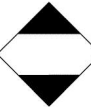

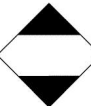


Product/ingredient name	LogP _{ow}	BCF	Potential
ethanol	-0.31	-	low
(R)-p-mentha-1,8-diene	4.57	-	high

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Methods of disposal : Dispose of according to all federal, state and local applicable regulations.

14. Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADG	UN1993	FLAMMABLE LIQUID, N.O.S.	3	III		Hazchem code +3Y
ADR	UN1993	FLAMMABLE LIQUID, N.O.S.	3	III	 	Hazard identification number 30 Limited quantity LQ7 Special provisions 274 601 640E Tunnel code (D/E)
IMDG	UN1993	FLAMMABLE LIQUID, N.O.S.	3	III	 	Emergency schedules (EmS) F-E, _S-E_
IATA	UN1993	Flammable liquid, n.o.s.	3	III	 	Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 309 Cargo Aircraft Only Quantity limitation: 220 L Packaging instructions: 310 Limited Quantities - Passenger Aircraft Quantity limitation: 10 L Packaging instructions: Y309

PG* : Packing group

15. Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Not available.

No listed substance

Australia inventory (AICS) : All ingredients that are not contained in the AICS database are below registration thresholds.

16. Other information

Date of issue : 1/28/2013.

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.