

# SAFETY DATA SHEET



Joico IRONCLAD Thermal Protectant Spray, 55% VOC

## 1. Identification of the material and supplier

### Names

**Product name** : Joico IRONCLAD Thermal Protectant Spray, 55% VOC

**Distributor** : Sabre Corporation PTY LTD  
Building 8, Suite 6, level 2 / 49 Frenchs Forest Road  
Forest Central Business Park  
Frenchs Forest, NSW, 2086

**Manufacturer** : Zotos International, INC  
100 Tokeneke Road,  
Darien, CT 06820  
www.zotos.com

**Emergency telephone number** : 131126

## 2. Hazards identification

**Classification** : F; R11

**Risk phrases** : R11- Highly flammable.

**Safety phrases** : S2- Keep out of the reach of children.  
S46- If swallowed, seek medical advice immediately and show this container or label.

**Hazard statements** : FLAMMABLE AEROSOL. CAUSES EYE IRRITATION.

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
Ethyl alcohol	64-17-5	50.86
1,1-difluoroethane	75-37-6	43.30
2-Butenedioic acid (2Z)-, polymer with methoxyethene, butyl ester	54578-91-5	5.10
(R)-p-Mentha-1,8-diene	5989-27-5	0.01

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** : None.

## 5. Fire-fighting measures

- Extinguishing media** : Use dry chemical, CO<sub>2</sub>, 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.
- Hazardous thermal decomposition products** : may be released including hydrofluoric and/or carbonyl halides
- Special protective equipment for fire-fighters** : Immediately contact emergency personnel. Flammable material In case of insufficient ventilation, wear suitable respiratory equipment.
- Hazchem code** : 2YE

## 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
Ethyl alcohol  (R)-p-Mentha-1,8-diene	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 1880 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>TRGS900 AGW (Germany, 3/2015). Absorbed through skin. Skin sensitizer.</b> PEAK: 20 ppm 15 minutes. PEAK: 112 mg/m <sup>3</sup> 15 minutes. TWA: 5 ppm 8 hours. TWA: 28 mg/m <sup>3</sup> 8 hours.

- 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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

## 8. Exposure controls/personal protection

- 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- 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** : 0.81 to 0.85
- Flash point** : Closed cup: 13°C (55.4°F)
- pH** : 6 to 9
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 9.696 kJ/g
- Flame duration** : Not available.

## 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 direct sunlight. Avoid contact with ignition and heat sources and oxidizers. Store away from oxidizing agents.
- 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** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.
- Acute toxicity**

## 11. Toxicological information

Product/ingredient name	Result	Dose	Exposure
Ethyl alcohol	LC50 Inhalation Vapor	124700 mg/m <sup>3</sup>	4 hours
(R)-p-Mentha-1,8-diene	LD50 Oral	7 g/kg	-
	LD50 Dermal	>5000 mg/kg	-
	LD50 Oral	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
Ethyl alcohol	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	-
(R)-p-Mentha-1,8-diene	Skin - Mild irritant	-	24 hours 10 Percent	-

**Conclusion/Summary** : Not available.

#### Sensitizer

**Conclusion/Summary** : Not available.

#### 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** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing

**Ingestion** : No specific data.

**Skin** : No specific data.

**Eyes** : Adverse symptoms may include the following:  
irritation  
redness

**Target organs** : Contains material which may cause damage to the following organs: blood, the reproductive system, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), ears, eye, lens or cornea.

## 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
Ethyl alcohol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
(R)-p-Mentha-1,8-diene	Acute EC50 421 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 688 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

**Conclusion/Summary** : Not available.

### Other ecological information

#### Persistence/degradability

**Conclusion/Summary** : Not available.

#### Bioaccumulative potential





Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Ethyl alcohol	-0.35	-	low
1,1-difluoroethane	1.13	-	low
2-Butenedioic acid (Z)-, polymer with methoxyethene, butyl ester	1	-	low
(R)-p-Mentha-1,8-diene	4.38	1022	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	UN1950	AEROSOLS	2.1	-		<p><b>Hazchem code</b> 2YE</p> <p><b>Special provisions</b> 63, 190, 277, 327</p>
ADR	UN1950	AEROSOLS	2	-	  	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><b>Limited quantity</b> LQ2</p> <p><b>Special provisions</b> 190 327 625</p> <p><b>Tunnel code</b> (D)</p>

## 14. Transport information

<b>IMDG</b>	UN1950	AEROSOLS. Marine pollutant (ethanol)	2.1	-	  	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><b>Emergency schedules (EmS)</b> F-D, S-U</p> <p><b>Special provisions</b> 63, 190, 277, 327, 959</p>
<b>IATA</b>	UN1950	Aerosols, flammable	2.1	-	 	<p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p> <p><b>Passenger and Cargo Aircraft</b> Quantity limitation: 75 kg Packaging instructions: 203</p> <p><b>Cargo Aircraft Only</b> Quantity limitation: 150 kg Packaging instructions: 203</p> <p><b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 30 kg Packaging instructions: Y203</p> <p><b>Special provisions</b> A145</p>

PG\* : Packing group

## 15. Regulatory information

### [Standard Uniform Schedule of Medicine and Poisons](#)

Not regulated.

### [Control of Scheduled Carcinogenic Substances](#)

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

## 16. Other information

**Date of issue** : 1/25/2018

### 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.