

## ThermaSwim

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### PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** ThermaSwim  
**Common Name:** Isopropanol  
**SDS Number:** 6  
**Revision Date:** 3/15/2018  
**Version:** 1  
**CAS Number:** 67-63-0  
**Product Description:** Clear, blue liquid  
**Product Use:** Liquid solar blanket  
**Instructions:** Only in the event of a transportation emergency involving spills, leaks, fires or accidents call Chemtrec at (800) 424-9300  
  
**Supplier Details:** N. Jonas & Co., Inc.  
 4520 Adams Circle  
 Bensalem, PA 19020  
  
**Phone:** 215-639-8071

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### HAZARDS IDENTIFICATION

#### Classification of Substance

##### GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Flammable Liquids, 2  
 Health, Acute toxicity, 5 Oral  
 Health, Acute toxicity, 5 Dermal  
 Health, Skin corrosion/irritation, 2  
 Health, Serious Eye Damage/Eye Irritation, 2 A  
 Health, Serious Eye Damage/Eye Irritation, 2 B  
 Health, Specific target organ toxicity - Single exposure, 3

#### GHS Label Elements, Including Precautionary Statements

**GHS Signal Word:** **DANGER**

**GHS Hazard Pictograms:**



##### GHS Hazard Statements:

H225 - Highly flammable liquid and vapour  
 H303 - May be harmful if swallowed  
 H313 - May be harmful in contact with skin  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H320 - Causes eye irritation  
 H336 - May cause drowsiness or dizziness

##### GHS Precautionary Statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces.  
 P233 - Keep container tightly closed.  
 P240 - Ground/bond container and receiving equipment.  
 P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
 P242 - Use only non-sparking tools.  
 P243 - Take precautionary measures against static discharge.  
 P261 - Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 P264 - Wash skin thoroughly after handling.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P280 - Wear protective gloves.  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.



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P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 - IF INHALED: Remove victim 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.  
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instructions on this label).  
P332 + P313 - If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 - If eye irritation persists: Get medical advice/ attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 - Dispose of contents/ container to an approved waste disposal plant.

### Hazards not Otherwise Classified (HNOC) or not Covered by GHS

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients		
CAS#	%	Chemical Name
67-63-0		2-Propanol
36653-82-4		1-Hexadecanol

## 4 FIRST AID MEASURES

**Inhalation:** Remove victim to fresh air. If cough or other respiratory symptoms develop, consult medical personnel.

**Skin Contact:** Remove contaminated clothing. Wash material off the skin with soap and plenty of water. If redness, itching or a burning sensation develops, get medical attention. Launder contaminated clothing before reuse.

**Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Take out contact lenses

**Ingestion:** Do not induce vomiting. Give 1 or 2 glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. Never give anything by mouth to an unconscious person.

## 5 FIRE FIGHTING MEASURES

**Flammability:** Lower: 2.0; Upper: 12.7 (% by volume)

**Flash Point:** 54 deg. F.; 12 deg. C

**Flash Point Method:** 54 deg. F.; 12 deg. C

**Autoignition Temperature:** 750 deg. F.; 399 deg. C.

**Firefighting Instructions:** Use carbon dioxide, foam or dry chemical. Water may be unsuitable for extinguishing fire involving this product, but may be helpful in diluting the material to nonflammable concentrations and for keeping adjacent containers cool. Avoid spreading burning liquid with water used for cooling purposes.

**Firefighting Equipment:** Self-contained breathing apparatus with full face piece and protective clothing.

## 6 ACCIDENTAL RELEASE MEASURES

**Ventilate spill area. Remove all sources of ignition. Wear skin, eye and respiratory protection. Contain and recover liquid when possible. Use nonspeaking tools and equipment. Collect liquid in an appropriate container or absorb with an inert materials (e.g. vermiculite, dry sand, earth). Do not use combustible materials such as sawdust. Sweep up absorbent material, place in a chemical waste container and remove from work area.**



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### 7 HANDLING AND STORAGE

- Handling Precautions:** Use in a well ventilated area away from all sources of ignition. Do not allow smoking in use area. Only use nonsparking tools and equipment.
- Storage Requirements:** Store in a cool, well ventilated area, away from sources of ignition. Storage areas should be designated NO SMOKING area.

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering Controls:** Use ventilation adequate to maintain safe levels. Provide eyewash station and safety shower in work area
- Personal Protective Equipment:** 2-Propanol cas#:(67-63-0) []
- Personal protective equipment
- Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Full contact: Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 480 min Material tested:Camatril (KCL 730 / Aldrich Z677442, Size M)
- Splash contact: Material: Nitrile rubber Minimum layer thickness: 0.2 mm Break through time: 60 min Material tested:Dermatril P (KCL 743 / Aldrich Z677388, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
- Body Protection: impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
- Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 1-Hexadecanol cas#:(36653-82-4) []
- Personal protective equipment
- Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
- Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash

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and dry hands. Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested: Dermatrill (KCL 740 / Aldrich Z677272, Size M) Splash contact data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**No ACGIH TLV or OSHA PEL assigned to this product. The ACGIH TLV and OSHA PEL for 2-propanol are 400 ppm. Minimize exposure in accordance with good hygiene practice**

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear blue liquid	<b>Solubility:</b>	Miscible
<b>Specific Gravity or Density:</b>	0.8	<b>Vapor Density:</b>	44 mg Hg @ 77 deg. F. (25 deg. C)
<b>Boiling Point:</b>	180 degrees F; 82 degrees C		

## 10 STABILITY AND REACTIVITY

<b>Reactivity:</b>	Stable under normal conditions
<b>Chemical Stability:</b>	Stable under normal conditions. Heat and sunlight can contribute to instability.
<b>Conditions to Avoid identification:</b>	Heat, flame, strong oxidizers, anhydride, isocyanate, organometallic contaminants
<b>Materials to Avoid identification:</b>	Heat, flame, strong oxidizers, anhydride, isocyanate, organometallic contaminants
<b>Hazardous Decomposition:</b>	Carbon dioxide and carbon monoxide
<b>Hazardous Polymerization:</b>	Will not occur.

## 11 TOXICOLOGICAL INFORMATION

2-Propanol cas#:(67-63-0) []

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - 5,045 mg/kg Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Somnolence (general depressed activity).

LC50 Inhalation - rat - 8 h - 16000 ppm

LD50 Dermal - rabbit - 12,800 mg/kg

no data available

Skin corrosion/irritation: Skin - rabbit Result: Mild skin irritation

Serious eye damage/eye irritation: Eyes - rabbit Result: Eye irritation - 24 h

Respiratory or skin sensitisation: no data available



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Germ cell mutagenicity: no data available

### Carcinogenicity:

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

### Additional Information:

RTECS: NT8050000

Central nervous system depression, prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects.

Kidney - Irregularities - Based on Human Evidence

1-Hexadecanol cas#:(36653-82-4) []

### Information on toxicological effects

#### Acute toxicity:

Oral LD50 LD50 Oral - rat - 5,000 mg/kg Remarks: Cardiac:Other changes. Lungs, Thorax, or Respiration:Other changes.

Inhalation LC50 no data available

Dermal LD50 LD50 Dermal - rabbit - > 2,600 mg/kg

Other information on acute toxicity

Skin corrosion/irritation: Skin - rabbit - Mild skin irritation - 24 h

Serious eye damage/eye irritation: Eyes - rabbit - Mild eye irritation

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: Not mutagenic in Ames Test.

### Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.



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OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):  
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):  
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: MM0225000

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## ECOLOGICAL INFORMATION

2-Propanol cas#:(67-63-0) []

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h.

Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h.

other aquatic invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h.

EC50 - Algae - > 1,000.00 mg/l - 24 h

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available



## ThermaSwim

1-Hexadecanol cas#:(36653-82-4) []

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - other fish - > 0.4 mg/l - 96 h.

Method: OECD Test Guideline 203 Remarks: Aquatic toxicity is unlikely due to low solubility.

Persistence and degradability: Bioaccumulative potential:

Bioaccumulation *Leuciscus idus melanotus* - 3 d Bioconcentration factor (BCF): 1,230

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

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### DISPOSAL CONSIDERATIONS

2-Propanol cas#:(67-63-0) []

Waste treatment methods

Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

1-Hexadecanol cas#:(36653-82-4) []

Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

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### TRANSPORT INFORMATION

1219, PGII, (ISOPROPANOL)

Placard/Label: FLAMMABLE LIQUID

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### REGULATORY INFORMATION



## ThermaSwim

### Component (CAS#) [%] - CODES

2-Propanol (67-63-0) [n/a%] MASS, NJHS, NRC, OSHAWAC, PA, SARA313, TSCA, TXAIR

1-Hexadecanol (36653-82-4) [n/a%] TSCA

### Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List  
NJHS = NJ Right-to-Know Hazardous Substances  
NRC = Nationally Recognized Carcinogens  
OSHAWAC = OSHA Workplace Air Contaminants  
PA = PA Right-To-Know List of Hazardous Substances  
SARA313 = SARA 313 Title III Toxic Chemicals  
TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level

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## OTHER INFORMATION

HMIS III: Health = 2, Fire = 3, Physical Hazard = 0

HMIS		
HEALTH	<input type="checkbox"/>	2
FLAMMABILITY	<input type="checkbox"/>	3
PHYSICAL HAZARD	<input type="checkbox"/>	0
PERSONAL PROTECTION	<input type="checkbox"/>	