

# SAFETY DATA SHEET

Classification according to the regulation OSHA 29 CFR 1900.1200 HCS 2012

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Revision Number 2

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product Identifier

Product name MICHEM INDICATOR 001  
Product code MI001

### Recommended use of the chemical and restrictions on use

Recommendations on Use Industrial use  
Uses advised against No information available

### Details of the supplier of the safety data sheet

Manufacturer Michelman, Inc.  
9080 Shell Road  
Cincinnati, Ohio 45236  
(513)793-7766

### Emergency Telephone Number

Emergency Telephone CHEMTREC: +1-703-527-3887 (INTERNATIONAL)  
1-800-424-9300 (NORTH AMERICA)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Gases)	Category 4
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 2
Flammable Liquids	Category 2

Signal Word DANGER

Hazard statements HARMFUL IF INHALED  
Causes serious eye irritation  
May cause damage to organs  
May be harmful if swallowed  
Toxic to aquatic life with long lasting effects

Physical Hazards Highly flammable liquid and vapor



#### Precautionary Statements - Prevention

Use only outdoors or in a well-ventilated area  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Do not eat, drink or smoke when using this product  
 Keep away from heat/sparks/open flames/hot surfaces. — 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  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid release to the environment

#### Precautionary Statements - Response

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician  
 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  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction  
 Collect spillage

#### Precautionary Statements - Storage

Store locked up  
 Store in a well-ventilated place. Keep cool

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards Not Otherwise Classified (HNOC)

Not applicable

#### OTHER INFORMATION

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature of the preparation** Indicator solution to detect the presence of acid functional primers.

Michelman formulas are confidential and proprietary. Therefore, a percent range is provided for the concentration of each classified component in this mixture.

Chemical name	CAS-No	Weight %	GHS - Classification
ETHYL ALCOHOL, DENATURED	64-17-5	60-100	Flam. Liq. 2 (H225)

METHANOL	67-56-1	4-10	Acute Tox. 3 (H301) Flam. Liq. 2 (H225) STOT SE 1 (H370) Acute Tox. 3 (H331) Acute Tox. 3 (H311)
ISOPROPANOL	67-63-0	4-10	Flam. Liq. 2 (H225) STOT SE 3 (H336) Eye Irrit. 2 (H319)

#### 4. FIRST AID MEASURES

##### FIRST AID MEASURES

<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
<b>Inhalation</b>	Move to fresh air. Consult a physician .
<b>Ingestion</b>	Rinse mouth. Call a physician immediately.

##### Most important symptoms and effects, both acute and delayed

<b>Most Important Symptoms/Effects</b>	No information available.
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##### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray.

##### Extinguishing media which shall not be used for safety reasons

Keep away from heat and sources of ignition.

##### Specific hazards arising from the chemical

No information available.

<b>Mechanical sensitivity (shock)</b>	In fire conditions.
<b>Mechanical sensitivity (Friction)</b>	May be ignited by heat, sparks or flames.

##### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
<b>Environmental precautions</b>	Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Keep away from open flames, hot surfaces and sources of ignition.

### Conditions for safe storage, including any incompatibilities

#### Storage

Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition.

#### Incompatible Products

None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure guidelines

Chemical name	ACGIH TLV	ACGIH OEL (STEL)	OSHA PEL	OSHA STEL	NIOSH IDLH	Japan
ETHYL ALCOHOL, DENATURED	1000 ppm STEL	1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>		IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>	
ISOPROPANOL	400 ppm STEL TWA: 200 ppm	400 ppm	TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m <sup>3</sup>		IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1225 mg/m <sup>3</sup>	Ceiling: 400 ppm Ceiling: 980 mg/m <sup>3</sup> ISHL/ACL: 200 ppm
METHANOL	250 ppm STEL TWA: 200 ppm Skin	250 ppm	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m <sup>3</sup> (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m <sup>3</sup> Skin		IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> STEL: 250 ppm STEL: 325 mg/m <sup>3</sup>	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> Skin ISHL/ACL: 200 ppm

### Appropriate engineering controls

#### Engineering Measures

Showers  
Eyewash stations  
Ventilation systems.

#### Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained

### Individual protection measures, such as personal protective equipment

#### Eye/face Protection

Tightly fitting safety goggles.

#### Skin and body protection

Long sleeved clothing. Protective gloves.

#### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	liquid
<b>Appearance</b>	No information available
<b>Odor</b>	No information available
<b>Freezing Point</b>	0 °C
<b>Odor Threshold</b>	No information available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>pH</b>	13.6
<b>Density</b>	no data available
<b>Melting/Freezing Point</b>	no data available
<b>Boiling Point/Boiling Range</b>	No data available
<b>Flash Point</b>	13 °C / 55 °F
<b>Evaporation Rate</b>	no data available
<b>Flammability (solid, gas)</b>	no data available
<b>Flammability Limits in Air</b>	
Upper Flammability Limit	No information available
Lower Flammability Limit	No information available
<b>Specific Gravity</b>	0.8
<b>Water Solubility</b>	no data available
<b>Partition Coefficient: n-octanol/water</b>	No information available
<b>Autoignition Temperature</b>	no data available
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	No data available

**10. STABILITY AND REACTIVITY****Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

None known based on information supplied.

**Hazardous decomposition products**

None known based on information supplied.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Vapours may irritate throat and respiratory system.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin contact</b>	There is no data available for this product.
<b>Ingestion</b>	MAY BE HARMFUL IF SWALLOWED.

**Acute toxicity**

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
ETHYL ALCOHOL, DENATURED 64-17-5	7060 mg/kg (rat)	-	124.7 mg/L ( Rat ) 4 h
ISOPROPANOL 67-63-0	4396 mg/kg ( Rat )	12800 mg/kg ( Rabbit )	16000 ppm ( Rat ) 8 h
METHANOL 67-56-1	5628 mg/kg ( Rat )	-	83.2 mg/L ( Rat ) 4 h

**Information on toxicological effects**

<b>Symptoms</b>	No information available.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity**

Chemical name	ACGIH	IARC	NTP	OSHA
ETHYL ALCOHOL, DENATURED 64-17-5	A3	Group 1	Known	X
ISOPROPANOL 67-63-0	-	Group 1 Group 3		X

<b>Irritation</b>	Irritating to eyes and respiratory system.
<b>Sensitization</b>	No information available.
<b>Mutagenic Effects</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Target organ effects</b>	Lungs.
<b>Aspiration Hazard</b>	No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2036 mg/kg  
 ATEmix (dermal) 6103 mg/kg  
 ATEmix (inhalation-gas) 14575 mg/l  
 ATEmix (inhalation-dust/mist) 10 mg/l

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

4.90275% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
ETHYL ALCOHOL, DENATURED 64-17-5		LC50 13400 - 15100 mg/L Pimephales promelas 96 h LC50> 100 mg/L Pimephales promelas 96 h LC50 12.0 - 16.0 mL/L Oncorhynchus mykiss 96 h	LC50 9268 - 14221 mg/L 48 h EC50 = 10800 mg/L 24 h EC50 = 2 mg/L 48 h
METHANOL 67-56-1		LC50> 100 mg/L Pimephales promelas 96 h LC50 13500 - 17600 mg/L Lepomis macrochirus 96 h LC50 18 - 20 mL/L Oncorhynchus mykiss 96 h LC50 19500 - 20700 mg/L Oncorhynchus mykiss 96 h LC50= 28200 mg/L Pimephales promelas 96 h	
ISOPROPANOL 67-63-0	EC50 > 1000 mg/L 72 h EC50 > 1000 mg/L 96 h	LC50> 1400000 µg/L Lepomis macrochirus 96 h LC50= 11130 mg/L Pimephales promelas 96 h LC50= 9640 mg/L Pimephales promelas 96 h	EC50 = 13299 mg/L 48 h

**Persistence and degradability** No information available.

**Mobility** No information available

### Bioaccumulation

Chemical name	Log Pow
ETHYL ALCOHOL, DENATURED 64-17-5	-0.32
ISOPROPANOL 67-63-0	0.05 0.05 at 25 °C
METHANOL 67-56-1	-0.77

### Other adverse effects

**Endocrine system** None known

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste Disposal Method** This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). RCRA waste code: D001.

**Contaminated Packaging** Dispose of in accordance with local regulations.

**US EPA Waste Number** D001

## 14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated (Excepted Quantity Class 3)
<u>IATA</u>	Not regulated (Excepted Quantity Class 3)
<u>IMDG</u>	Not regulated (Excepted Quantity Class 3)

## 15. REGULATORY INFORMATION

### International Inventories

TSCA (USA)	Complies
DSL (Canada)	Complies
EINECS (Europe)	Complies
ENCS (Japan)	Does not comply
IECSC (China)	Complies
KECL (Korea)	Does not comply
PICCS (Philippines)	Complies
AICS (Australia)	Complies
ERMA (New Zealand)	Complies
Taiwan	This product complies with TECS

### Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values %
ISOPROPANOL - 67-63-0	1.0
METHANOL - 67-56-1	1.0

#### SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

#### Clean Water Act

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
SODIUM HYDROXIDE 1310-73-2	1000 lb			X

#### Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) and Volatile Organic Compounds (VOCs) (see 40 CFR 61)

Chemical name	CAS-No	Weight %	HAPS data	Volatile organic compounds	Class 1 Ozone Depletors	Class 2 Ozone Depletors
ETHYL ALCOHOL, DENATURED	64-17-5	86.4522		Present		
ISOPROPANOL	67-63-0	4.8029		Present		
METHANOL	67-56-1	4.8029	Present	Present		

#### CERCLA

Chemical name	Hazardous Substances Reportable Quantities	Extremely Hazardous Substances RQs	RQ
METHANOL 67-56-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ



SODIUM HYDROXIDE 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
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#### California Prop. 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Prop. 65
ETHYL ALCOHOL, DENATURED - 64-17-5	Developmental
METHANOL - 67-56-1	Developmental

### 16. OTHER INFORMATION

**HMIS**                      **Health hazard** 2                      **Flammability** 4                      **Stability** 0                      **PPE** G

**Prepared by**                      Michelman, Inc.

**Revision date**                      06-Aug-2014

**Reason for revision**                      No information available

#### Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Material Safety Data Sheet**