



*a member of the Roche Group*

## Material Safety Data Sheet

Material Name: ChipMap Hybe 80

MSDS ID: 00232195

### \*\*\* Section 1 - Chemical Product and Company Identification\*\*\*

#### Manufacturer Information

VENTANA MEDICAL SYSTEMS INC.  
1910 E. Innovation Park Drive  
Tucson, AZ 85755  
Phone: (520) 887-2155

#### EMERGENCY TELEPHONE NUMBER:

(800) 424-9300 (USA/Canada)  
CHEMTREC: +1 (703) 527-3887 (International)

**Material Name:** ChipMap Hybe 80

#### Product Number(s)

760-127, 05266378001

#### Product Use

Research use only

### \*\*\* Section 2 - Hazards Identification\*\*\*

**NFPA Ratings:** Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Preparation

Repr.Cat.2; R:61

#### Risks

May cause harm to the unborn child.

#### EMERGENCY OVERVIEW

**Color:** colorless to amber

**Physical Form:** liquid

**Odor:** odorless

**Major Health Hazards:** harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, reproductive effects

#### POTENTIAL HEALTH EFFECTS

##### Inhalation

**Short Term:** irritation, cough, sore throat, nausea, vomiting, stomach pain, headache, dizziness, lung congestion, unconsciousness

**Long Term:** irritation, nausea, headache, kidney damage, liver damage, unconsciousness

##### Skin

**Short Term:** irritation

**Long Term:** irritation, reproductive effects

##### Eye

**Short Term:** irritation, eye damage

**Long Term:** irritation, eye damage

##### Ingestion

**Short Term:** gastrointestinal irritation, fever, nausea, vomiting, diarrhea, stomach pain, loss of appetite, weight loss, headache, dizziness, disorientation, lung congestion, effects on the brain, convulsions, coma, reproductive effects

**Long Term:** changes in blood pressure, kidney damage, liver damage, reproductive effects

#### OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

# Material Safety Data Sheet

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MSDS ID: 00232195

## \*\*\* Section 3 - Composition/Information on Ingredients\*\*\*

CAS #	Component / EU Number	Percent	Symbol(s)	Risk Phrase(s)
75-12-7	FORMAMIDE 200-842-0	40-70	T	R:61
Not Available	NON-HAZARDOUS -	7-13	---	---
7647-14-5	SODIUM CHLORIDE 231-598-3	5-10	Xi	R:36

## \*\*\* Section 4 - First Aid Measures\*\*\*

### Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

### Skin

Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Get medical attention, if needed.

### Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

### Ingestion

If a large amount is swallowed, get medical attention.

## \*\*\* Section 5 - Fire-Fighting Measures\*\*\*

See Section 9 for Flammability Properties

### Flammable Properties

Negligible fire hazard.

### Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

### Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

### Hazardous Combustion Products

**Thermal decomposition or combustion products:** hydrogen chloride, oxides of carbon, oxides of nitrogen, oxides of sulfur

### Sensitivity to Mechanical Impact

Not sensitive

### Sensitivity to Static Discharge

Not sensitive

## \*\*\* Section 6 - Accidental Release Measures\*\*\*

### Occupational Spill/Release

Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

## \*\*\* Section 7 - Handling and Storage\*\*\*

### Handling Procedures

Wash thoroughly after handling.

### Storage Procedures

Store and handle in accordance with all current regulations and standards. Store between 15 C and 30 C. See original container for storage recommendations. Keep separated from incompatible substances.

# Material Safety Data Sheet

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MSDS ID: 00232195

## \*\*\* Section 8 - Exposure Controls/Personal Protection \*\*\*

### Exposure Limits

#### FORMAMIDE (75-12-7)

<b>ACGIH:</b>	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route
<b>NIOSH:</b>	10 ppm TWA; 15 mg/m3 TWA Potential for dermal absorption
<b>OSHA:</b>	20 ppm TWA; 30 mg/m3 TWA 30 ppm STEL; 45 mg/m3 STEL
<b>Austria:</b>	18 ppm STEL (4 X 15 min); 32 mg/m3 STEL (4 X 15 min) 9 ppm MAK; 16 mg/m3 MAK skin notation
<b>Belgium:</b>	10 ppm TWA; 18 mg/m3 TWA Skin
<b>Denmark:</b>	10 ppm TWA; 18 mg/m3 TWA Potential for cutaneous absorption
<b>Finland:</b>	20 ppm STEL; 37 mg/m3 STEL 10 ppm TWA; 19 mg/m3 TWA Potential for cutaneous absorption
<b>France:</b>	20 ppm VME; 30 mg/m3 VME
<b>Germany (DFG):</b>	skin notation
<b>Greece:</b>	30 ppm STEL; 45 mg/m3 STEL 20 ppm TWA; 30 mg/m3 TWA skin - potential for cutaneous absorption
<b>Ireland:</b>	30 ppm STEL; 45 mg/m3 STEL 20 ppm TWA; 30 mg/m3 TWA
<b>Portugal:</b>	10 ppm TWA skin - potential for cutaneous exposure
<b>Spain:</b>	10 ppm VLA-ED; 19 mg/m3 VLA-ED skin - potential for cutaneous exposure
<b>Sweden:</b>	10 ppm LLV; 20 mg/m3 LLV 15 ppm STV; 30 mg/m3 STV Skin notation
<b>United Kingdom:</b>	30 ppm STEL; 56 mg/m3 STEL 20 ppm TWA; 37 mg/m3 TWA

### Ventilation

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

#### Eyes/Face

Safety glasses or goggles are recommended when there is a potential for eye contact. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### Protective Clothing

Lab coat or apron.

#### Glove Recommendations

Wear appropriate chemical resistant gloves.

#### Protective Materials

nitrile

#### Respiratory Protection

No respirator is required under normal conditions of use.

# Material Safety Data Sheet

Material Name: ChipMap Hybe 80

MSDS ID: 00232195

## \*\*\* Section 9 - Physical and Chemical Properties\*\*\*

<b>Physical State:</b>	Liquid	<b>Appearance:</b>	Colorless to amber liquid
<b>Color:</b>	colorless to amber	<b>Physical Form:</b>	liquid
<b>Odor:</b>	odorless	<b>Odor Threshold:</b>	Not available
<b>pH:</b>	neutral	<b>Decomposition:</b>	Not available
<b>Flash Point:</b>	not flammable	<b>Evaporation Rate:</b>	Not available
<b>LEL:</b>	Not available	<b>UEL:</b>	Not available
<b>Vapor Pressure:</b>	Not available	<b>Vapor Density (air = 1):</b>	Not available
<b>Density:</b>	Not available	<b>Water Solubility:</b>	miscible
<b>Log KOW:</b>	Not available	<b>Coeff. Water/Oil Dist.:</b>	Not available
<b>Auto Ignition:</b>	Not available	<b>Viscosity:</b>	Not available
<b>Volatility:</b>	Not available		

## \*\*\* Section 10 - Stability and Reactivity\*\*\*

### Chemical Stability

Stable at normal temperatures and pressure.

### Conditions to Avoid

None reported.

### Materials to Avoid

iodine, oxidizing materials, pyridines, sulfur trioxide

### Decomposition Products

**Thermal decomposition or combustion products:** hydrogen chloride, oxides of carbon, oxides of nitrogen, oxides of sulfur

### Possibility of Hazardous Reactions

Will not polymerize.

## \*\*\* Section 11 - Toxicological Information\*\*\*

### Acute and Chronic Toxicity

#### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

#### **FORMAMIDE (75-12-7)**

Inhalation LC50 Rat >3900 ppm 6 h; Oral LD50 Rat >5000 mg/kg

#### **SODIUM CHLORIDE (7647-14-5)**

Inhalation LC50 Rat >42 g/m<sup>3</sup> 1 h; Oral LD50 Rat 3 g/kg; Dermal LD50 Rabbit >10 g/kg

# Material Safety Data Sheet

Material Name: ChipMap Hybe 80

MSDS ID: 00232195

## RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

### FORMAMIDE (75-12-7)

**Inhalation:** >3900 ppm/6 hour Inhalation Rat LC50

**Oral:** 5570 mg/kg Oral Rat LD50; 4000 mg/kg Oral Rat LD50; 5577 mg/kg Oral Rat LD50

**Skin:** 17 gm/kg Skin Rabbit LD50

### SODIUM CHLORIDE (7647-14-5)

**Oral:** 3000 mg/kg Oral Rat LD50

## Acute Toxicity Level

### FORMAMIDE (75-12-7)

**Toxic:** inhalation

**Moderately Toxic:** ingestion

**Slightly Toxic:** dermal absorption

### SODIUM CHLORIDE (7647-14-5)

**Moderately Toxic:** ingestion

## Irritation/Corrosivity

### RTECS Irritation

The components of this material have been reviewed, and RTECS publishes the following endpoints:

### FORMAMIDE (75-12-7)

100 mg Eyes Rabbit severe

### SODIUM CHLORIDE (7647-14-5)

10 mg Eyes Rabbit moderate; 100 mg/24 hour Eyes Rabbit moderate; 500 mg/24 hour Skin Rabbit mild

## Local Effects

### FORMAMIDE (75-12-7)

**Irritant:** inhalation, skin, eye

### SODIUM CHLORIDE (7647-14-5)

**Irritant:** eye

## Carcinogenicity

### Component Carcinogenicity

None of the substances in this preparation are listed by ACGIH, OSHA, NIOSH, NTP, IARC, Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, or United Kingdom.

## Mutagenic

No information available for the mixture.

## RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

## Reproductive Effects

Available data characterizes this substance as a reproductive hazard.

## RTECS Reproductive Effects

The components of this material have been reviewed, and RTECS publishes data for one or more components.

## Tumorigenic

No information available for the mixture.

## RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

## Medical Conditions Aggravated by Exposure

None known.

# Material Safety Data Sheet

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MSDS ID: 00232195

## \*\*\* Section 12 - Ecological Information\*\*\*

### Component Analysis - Aquatic Toxicity

#### FORMAMIDE (75-12-7)

**Fish:** 96 Hr LC50 Brachydanio rerio: 9135 mg/L [static]; 96 Hr LC50 Leuciscus idus: 4600-9300 mg/L [static]

**Algae:** 72 Hr EC50 Desmodesmus subspicatus: >500 mg/L; 96 Hr EC50 Desmodesmus subspicatus: >500 mg/L

**Invertebrate:** 48 Hr EC50 Daphnia magna: >500 mg/L

#### SODIUM CHLORIDE (7647-14-5)

**Fish:** 96 Hr LC50 Lepomis macrochirus: 5560-6080 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 12946 mg/L [static]; 96 Hr LC50 Pimephales promelas: 6020-7070 mg/L [static]; 96 Hr LC50 Pimephales promelas: 7050 mg/L [semi-static]; 96 Hr LC50 Pimephales promelas: 6420-6700 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4747-7824 mg/L [flow-through]

**Invertebrate:** 48 Hr EC50 Daphnia magna: 1000 mg/L; 48 Hr EC50 Daphnia magna: 340.7 - 469.2 mg/L [Static]

### Mobility

No information available for the mixture.

### Persistence & Degradation

No information available for the mixture.

### Bioaccumulative Potential

No information available for the mixture.

## \*\*\* Section 13 - Disposal Considerations\*\*\*

### Disposal Methods

Dispose in accordance with all applicable regulations.

### Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

## \*\*\* Section 14 - Transport Information\*\*\*

### US DOT Information

Not regulated.

### TDG Information

Not regulated.

### ADR Information

Not regulated.

### RID Information

Not regulated.

### IATA Information

Not regulated.

### ICAO Information

Not regulated.

### IMDG Information

Not regulated.

## \*\*\* Section 15 - Regulatory Information\*\*\*

### U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA 311/312

**Acute Health:** Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactive:** No

# Material Safety Data Sheet

Material Name: ChipMap Hybe 80

MSDS ID: 00232195

## U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component / EC Number	CAS	CA	MA	MN	NJ	PA	RI
FORMAMIDE	75-12-7	Yes	Yes	Yes	Yes	Yes	Yes

## California Proposition 65

Not regulated under California Proposition 65

## Canadian Regulations

### Canada WHMIS

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

**FORMAMIDE (75-12-7)**

0.1 %

### WHMIS Classification

D2A, D2B.

## European Regulations

This preparation has been classified for the European Union according to Annex VI Directives 67/548/EEC and 99/45/EC.

### Germany Water Classification

**FORMAMIDE (75-12-7)**

ID Number 1509, hazard class 1 - low hazard to waters

**SODIUM CHLORIDE (7647-14-5)**

ID Number 270, hazard class 1 - low hazard to waters

## EU Marking and Labelling

### Symbols

T Toxic

### Risk Phrases

R61 May cause harm to the unborn child.

### Safety Phrases

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 Avoid exposure - obtain special instructions before use.

## Japanese Regulations

### Japan Designated Chemical Substances (PRTR Law)

No components of this material are subject to reporting requirements as specified by the "Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management" nor are they included in the "Pollutant Release and Transfer Register (PRTR)" of designated chemicals.

### Japan Poisonous and Deleterious Substances

No components of this material are specified as poisonous or deleterious substances, as regulated by Japan under the Poisonous and Deleterious Substances Control Law.

### Industrial Safety and Health Law - Flammable Materials

No components of this material are specifically identified in Table 6-2 of the Enforcement Order of the Industrial Safety and Health Law which, if used in the workplace, require designation of an Operations Chief during confined space work and periodic machine inspections.

### Industrial Safety and Health Law - Label Disclosure

No components of this material are specifically required to be indicated on a container label as specified by Article 18 of the Enforcement Order of the Industrial Safety and Health Law.

### Industrial Safety and Health Law - Organic Solvents

No components of this material are specifically identified in Table 6-2 of the Enforcement Order of the Industrial Safety and Health Law which, if used in the workplace, require designation of an Operations Chief during confined space work and periodic machine inspections.

# Material Safety Data Sheet

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MSDS ID: 00232195

## \* \* \* Section 16 - Other Information \* \* \*

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

### Full text of R phrases in Section 3

**R36** Irritating to eyes.

**R61** May cause harm to the unborn child.

### Other Information

Limitations: The information and recommendations set forth in this MSDS are believed to be correct as of this date. Ventana Medical Systems, Inc. makes no warranty with respect to the content of this MSDS and disclaims all liability from reliance thereon.

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**MSDS Update:** 1/11/2011

End of Sheet 00232195