

H<sub>2</sub>Blue Hydrogen Test Reagent. „Eco formula“. Zur Messung von gelöstem Wasserstoff in Wasser. Pro 100 ppb (=0,1 ppm) gelöstem Wasserstoff entfärbt sich ein Tropfen. Becher bis zur 6 ml-Marke mit Wasser füllen. Beim Testen den Becher nicht schütteln. Nur sanft mit einem Stab umrühren. Kindersicher aufbewahren. Achtung: Die Tropfen können blaue Flecken auf Haut, Oberflächen oder Textilien hinterlassen. Achten Sie auf sorgsame Handhabung. Abwaschen des Bechers sofort nach Gebrauch mit Wasser und Spülmittel.

1. Den leeren, gesäuberten und trockenen Becher mit der zu messenden Wassersorte bis zur 6 ml Marke füllen.
2. Tropfenweise titrieren und nach jedem Tropfen prüfen, ob sich die blaue Farbe entfärbt.
3. Jeder entfärbte Tropfen (nach vorsichtigem Umrühren mit dem Stab) bedeutet 0,1 ppm gelösten Wasserstoff. Der erste Tropfen, der sich nicht mehr entfärbt, wird noch zum Messwert addiert.



# SDS

## Safety Data Sheet – H2 Sciences Inc.

**1**

### PRODUCT AND COMPANY IDENTIFICATION

**1.1 Product Identifiers**

Product Form	Mixture
Product Brand Name	H2Blue (eco formula)
Manufacturer	H2 Sciences Inc.
Synonyms	Reagent

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

Identified Uses	Laboratory Test Reagent
No specific uses advised against are identified.	

**1.3 Details of the Supplier of the Safety Data Sheet**

Manufacturer	H2 Sciences Inc. 1445 American Pacific Dr. Suite 110-239 Henderson, NV 89074
Phone	(719) 499-2973
Email	contact@h2sciencesinc.com
Website	www.h2sciencesinc.com

**1.4 Emergency Telephone Number**

Emergency phone #	(719) 499-2973
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**2**

### HAZARDS IDENTIFICATION

**2.1 Classification of the Substance or Mixture**

This product is classified as non-hazardous under OSHA's Hazard Communication Standard (HCS), 29 CFR 1910.1200 and the United Nations Globally Harmonized System (GHS Rev 3). However, all chemicals should be treated with caution.

**2.2 GHS Label Statements, Including Precautionary Statements****Signal Word**

Warning

**Pictograms****Hazard Statements**

H301, H302, H331, H401

**Precautionary Statements**

P102	Keep out of reach of children
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338	IF IN EYES: Remove contact lenses, if present and easy; continue rinsing.
P337 + P313	If eye irritation persists, get medical advice/attention
P501	Dispose of contents/container at an approved waste disposal plant.

**2.3 Hazards Not Otherwise Classified or Not Covered by GHS – none**

## 3 COMPOSITION INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Hazardous Components

Component	Classification	Concentration (by weight)
<b>METHYLENE BLUE</b>		
CAS # 61-73-4	Acute Tox 4, H302, H401	proprietary
EC # 200-515-2		
INDEX # 603-002-00-5		
<b>METHANOL</b>		
CAS # 67-56-1	Acute Tox 4, H301, H331	proprietary
EC # 200-659-6		
<b>WATER</b>		
CAS # 7732-18-5	Not Hazardous	proprietary
EC # 231-791-2		
<b>PLATINUM</b>		
CAS# 7440-06-4	Not Hazardous	proprietary

For the full text of the H-Statements mentioned in this section, see Section 16.

## 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

General advice: Consult a physician. Show the safety data sheet to the physician in attendance. Move away from dangerous area.

In case of skin contact: Wash off with soap and water

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes keeping eyelids open. Consult a physician if irritation persists.

If swallowed: DO NOT induce vomiting. Rinse mouth with water. Consult a physician.

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

Described in the labeling section (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed: No data available

## 5 FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable - Foam, Dry Powder, Carbon Dioxide, Water Spray, Sand

Unsuitable – Heavy Water Stream

### 5.2 Special hazards arising from the substance or mixture

Fire Hazard – Not Flammable

Explosion Hazard – Not Applicable

Reactivity - None

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

## 6 ACCIDENTAL RELEASE MEASURES

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

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

**7.1 Precautions for safe handling** - Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

**7.2 Conditions for safe storage, including any incompatibilities.**

Keep container tightly closed in a cool, dry and well-ventilated place. Do not freeze.

**7.3 Specific end use(s)**-Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### 8.1 Control Parameters

METHYLENE BLUE (61-73-4)	
ACGIH/OSHA	NOT APPLICABLE
WATER (7732-18-5)	
OSHA	NOT APPLICABLE
METHANOL (67-56-1)	
ACGIH/OSHA	NOT APPLICABLE
PLATINUM (7440-06-4)	
ACGIH/OSHA	NOT APPLICABLE

### 8.2 Exposure controls

#### Personal protective equipment

Eye contact should be prevented through the use of chemical safety glasses with side shields or splash-proof goggles. An emergency eye wash should be readily accessible to the work area.

To avoid staining of skin, wear gloves when handling.

## Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance/Form:	Color; Blue, Liquid
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	3.1
e) Melting point/freezing point	No data available
f) Initial boiling point and range	Lowest known value is 100°C (212 °F)
g) Flash point	80°C (176 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) U/L flammability limits	No data available
k) Vapor pressure	Highest known value is 23.8 torr (@ 25°C)
l) Vapor density	Highest known value is 0.8 g/L
m) Relative density	No data available
n) Water solubility	Miscible in water
o) Partition coefficient	No data available
p) Auto-ignition temp	No data available
q) Decomposition temp	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available
u) Specific gravity	0.997 at 20 °C
v) VOC (g/L)	31.82
<b>9.2 Other safety information</b>	No data available

**10.1 Reactivity**

Not reactive under recommended usage and storage conditions.

**10.2 Chemical stability**

Stable under recommended usage and storage conditions.

**10.3 Possibility of hazardous reactions**

Not established

**10.4 Conditions to avoid**

Direct sunlight, extremely high or low temperatures

**10.5 Incompatible materials**

Strong acids, strong bases

**10.6 Hazardous decomposition products**

Nitrogen oxides, carbon dioxide, sulfur compounds

## TOXICOLOGICAL INFORMATION

Likely routes of exposure: Inhalation; skin and eye contact

**11.1 Information on toxicological effects**

<b>METHYLENE BLUE (61-73-4)</b>	
LD50 oral rat	1180 mg/kg
ATE US (oral)	1180.000 mg/kg body weight
<b>METHANOL (67-56-1)</b>	
LD50 oral rat	10740 mg/kg (rat; exp. value)
ATE US (oral)	100.000 mg/kg body weight
<b>WATER (7732-18-5)</b>	
LD50 oral rat	>90000 mg/kg
ATE US (oral)	>90000.000 mg/kg body weight
<b>PLATINUM (7440-06-4)</b>	
	No Data Available

RTECS:	CAS# 61-73-4	SO5600000
Carcinogenicity:	CAS# 61-73-4	Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65
Acute toxicity:		No data available
Inhalation:		May cause respiratory irritation and breathing difficulty
Dermal:		May cause skin irritation
Skin corrosion/irritation		May cause skin irritation
Serious eye damage/irritation		May cause eye damage or irritation
Respiratory/skin sensitization		No data available
Germ cell mutagenicity		No data available
Reproductive toxicity		No data available
Spec. target organ tox. – sgl. exp.		No data available
Spec. target organ tox. – rptd. exp.		No data available
Aspiration hazard		No data available
Symptoms/injuries after skin contact		May stain skin

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Central nervous system depression, gastrointestinal disturbance, nausea, dizziness, headache, narcosis.

**12****ECOLOGICAL INFORMATION**

## 12.1 Toxicity

<b>METHYLENE BLUE (61-73-4)</b>	
LC50 fish 1	13 mg/L (48 h; <i>Oryzias latipes</i> )
EC50 Daphnia 1	2.26 mg/L (48 h; <i>Daphnia magna</i> )
LC50 fish 2	18 mg/L (96 h; <i>Mystus vittatus</i> )
EC50 Daphnia 2	4.93 mg/L (24 h; <i>Daphnia magna</i> )
TLM fish 1	10-100 (48 h; <i>Poecilia reticulata</i> )
<b>METHANOL (67-56-1)</b>	
LD50 fish 1	15,400 mg/L (96h; <i>Lepomis macro.</i> )
LC50 fish 2	29,400 mg/L (96h; Fathead minnow)
EC50	>10,000 mg/L (48h; Water flea)
<b>Aquatic Plants</b>	
EC50	22,000 mg/L (96h; <i>Scene. capri.</i> )
<b>Other adverse effects:</b>	
BOD;	600 mg/g – 1120 mg/g
COD :	1420 mg/g
<b>PLATINUM (7440-06-4)</b>	
No Data Available	

12.2 Persistence and degradability – Not established

12.3 Bio-accumulative potential – No data available

12.4 Mobility in soil – No data available

12.5 Results of PBT and vPvB assessment - No data available

12.6 Other adverse effects - No data available

**13****DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

**General information** Reuse or recycle products wherever possible. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

**Disposal methods** Absorb in vermiculite, dry sand or earth and place into containers. Place waste in labelled, sealed containers. Dispose of contents/container in accordance with national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

**Contaminated packaging**

Dispose of as unused product.

**15.1 US Federal****TSCA:**

CAS# 61-73-4 is listed on the TSCA Inventory (8b)

**SARA 302 Components** No chemicals in this product are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** No chemicals in this product are subject to the reporting requirements of SARA Title III, Section 313.

**OSHA Highly Hazardous**

None of the components are listed.

**15.2 US State**

**Massachusetts Right To Know Components** – Methanol CAS# 67-56-1 is listed

**Pennsylvania Right To Know Components** – Methanol CAS# 67-56-1 is listed

**New Jersey Right To Know Components** - Methylene Blue CAS# 61-73-4; – Methanol CAS# 67-56-1 is listed

**California Prop. 65 Components** - WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. METHANOL CAS# 67-56-1 Revision date 2012-03-16

**15.3 International**

**Canadian DSL/NDL** - CAS# 61-73-4 is listed on Canada's DSL list

**Canada Ingredient Disclosure List** - CAS# 61-73-4 is listed on Canada's Ingredient Disclosure List

**EU regulations** - No additional information available

**Classification according to Regulation (EC) No. 1272/2008 [CLP]** - No additional information available

**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]** - No additional information available

**Full text of H-Statements referred to under sections 2, 3 and 11.**

Acute Tox 4 (Oral)	Acute toxicity oral, category 4
Spec. target organ tox. – sgl. exp.	Specific target organ toxicity – single exposure
Spec. target organ tox. – rptd. exp.	Specific target organ toxicity – repeated exposure
Eye Irrit.	Eye irritation
H301	Toxic if Swallowed
H302	Harmful if swallowed
H331	Toxic if inhaled
H401	Toxic to aquatic life

**HMIS Rating**

Health hazard: 2

Physical Hazard 0

**NFPA Rating**

Health hazard: 2

Reactivity Hazard: 0

**Further information**

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**Preparation Information**

H2 Sciences Inc. Product Safety Department

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