

## SAFETY DATA SHEET DIFFERENTIATOR 1

According to Regulation (EU) No 453/2010

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Product name DIFFERENTIATOR 1  
Product No. PL.7065

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory reagent.

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

Supplier Pro-Lab Diagnostics  
3 Bassendale Road  
Wirral  
Merseyside  
CH62 3QL  
Tel: 0151 353 1613  
Fax: 0151 353 1614  
mowen@pro-lab.com

#### 1.4. Emergency telephone number

+44 (0)151 353 1613 Monday to Friday 9.00 to 17.00  
+44 (0)7714 429 646 outside the above hours

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xn;R20/21/22, R68/20/21/22. F;R11.

##### Human health

Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed. See section 11 for additional information on health hazards.

##### Physical and Chemical Hazards

Highly flammable Vapours may be ignited by a spark, a hot surface or an ember.

#### 2.2. Label elements

Contains METHANOL

##### Labelling



Harmful



Highly flammable

##### Risk Phrases

R11  
R20/21/22  
R68/20/21/22

Highly flammable  
Harmful by inhalation, in contact with skin and if swallowed.  
Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

##### Safety Phrases

S9  
S16  
S51  
S36/37  
S60

Keep container in a well-ventilated place.  
Keep away from sources of ignition - No smoking.  
Use only in well-ventilated areas.  
Wear suitable protective clothing and gloves.  
This material and its container must be disposed of as hazardous waste.

#### 2.3. Other hazards

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

<b>ETHANOL</b>	<b>60-100%</b>
<b>CAS-No.: 64-17-5</b>	<b>EC No.: 200-578-6</b>
Classification (EC 1272/2008) Flam. Liq. 2 - H225	Classification (67/548/EEC) F;R11
<b>HYDROCHLORIC ACID ...%</b>	<b>1-5%</b>
<b>CAS-No.: 7647-01-0</b>	<b>EC No.: 231-595-7</b>
Classification (EC 1272/2008) Skin Corr. 1B - H314 STOT SE 3 - H335	Classification (67/548/EEC) C;R34 Xi;R37
<b>METHANOL</b>	<b>1-5%</b>
<b>CAS-No.: 67-56-1</b>	<b>EC No.: 200-659-6</b>
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 STOT SE 1 - H370	Classification (67/548/EEC) F;R11 T;R23/24/25,R39/23/24/25

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### Inhalation

Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

#### Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! DO NOT induce vomiting. Get medical attention immediately. Immediately rinse mouth and provide fresh air.

#### Skin contact

Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention promptly if symptoms occur after washing.

#### Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

#### Inhalation.

Vapours may cause headache, fatigue, dizziness and nausea.

#### Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting.

#### Skin contact

Prolonged contact may cause redness, irritation and dry skin.

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## Eye contact

May irritate eyes.

## **4.3. Indication of any immediate medical attention and special treatment needed**

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

## SECTION 5: FIREFIGHTING MEASURES

### **5.1. Extinguishing media**

#### **Extinguishing media**

Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

#### **Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

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

#### **Hazardous combustion products**

During fire, toxic gases (CO, CO<sub>2</sub>) are formed.

#### **Unusual Fire & Explosion Hazards**

May travel considerable distance to source of ignition and flash back.

#### **Specific hazards**

Vapours may be ignited by a spark, a hot surface or an ember. Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### **5.3. Advice for firefighters**

#### **Special Fire Fighting Procedures**

Move container from fire area if it can be done without risk. Water spray should be used to cool containers. Be aware of danger for fire to re-start.

#### **Protective equipment for fire-fighters**

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Wear protective clothing as described in Section 8 of this safety data sheet.

### **6.2. Environmental precautions**

Avoid discharge to the aquatic environment.

### **6.3. Methods and material for containment and cleaning up**

Wear necessary protective equipment. Stop leak if possible without risk. DO NOT touch spilled material! Remove sources of ignition. Ventilate well. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area.

### **6.4. Reference to other sections**

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards. For waste disposal, see section 13.

## SECTION 7: HANDLING AND STORAGE

### **7.1. Precautions for safe handling**

Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Avoid inhalation of vapours/spray and contact with skin and eyes. Avoid eating, drinking and smoking when using the product. Wash hands after handling.

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

Keep away from heat, sparks and open flame. Store in a cool and well-ventilated place. Keep in original container. Ground container and transfer equipment to eliminate static electric sparks.

#### **Storage Class**

Flammable liquid storage.

### **7.3. Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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## 8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
ETHANOL	WEL	1000 ppm	1920 mg/m3			
HYDROCHLORIC ACID ...%	WEL	1 ppm	2 mg/m3	5 ppm	8 mg/m3	
METHANOL	WEL	200 ppm	266 mg/m3	250 ppm	333 mg/m3	Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through skin.

## 8.2. Exposure controls

### Protective equipment



### Hand protection

Use protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

### Eye protection

Wear approved safety goggles.

### Other Protection

Provide eyewash station.

### Hygiene measures

DO NOT SMOKE IN WORK AREA! Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Odour of alcohol.
Solubility	Soluble in water.
Flash point	~ 13°C CC (Closed cup).

### 9.2. Other information

Not determined.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Oxidising materials.

### 10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

### 10.3. Possibility of hazardous reactions

#### Hazardous Polymerisation

Will not polymerise.

### 10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with strong oxidisers.

### 10.5. Incompatible materials

#### Materials To Avoid

Strong oxidising substances.

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## 10.6. Hazardous decomposition products

During fire, toxic gases (CO, CO<sub>2</sub>) are formed.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### **Inhalation**

Harmful by inhalation. Harmful: possible risk of irreversible effects through inhalation.

#### **Ingestion**

Harmful if swallowed. Harmful: possible risk of irreversible effects if swallowed.

#### **Skin contact**

Harmful in contact with skin. Harmful: possible risk of irreversible effects in contact with skin.

#### **Eye contact**

Spray and vapour in the eyes may cause irritation and smarting.

#### Toxicological information on ingredients.

#### HYDROCHLORIC ACID ...% (CAS: 7647-01-0)

##### Acute toxicity:

##### **Acute Toxicity (Oral LD50)**

700 mg/kg Rat

Miscellaneous reference sources.

##### **Acute Toxicity (Dermal LD50)**

> 5010 mg/kg Rabbit

Miscellaneous reference sources.

##### **Acute Toxicity (Inhalation LC50)**

8.3 mg/l (dust/mist) Rat 30 minutes

REACH dossier information

#### METHANOL (CAS: 67-56-1)

##### Acute toxicity:

##### **Acute Toxicity (Oral LD50)**

> 1187 mg/kg Rat

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##### **Acute Toxicity (Inhalation LC50)**

> 115.9 mg/l (vapours) Rat 4 hours

REACH dossier information

#### ETHANOL (CAS: 64-17-5)

##### Acute toxicity:

##### **Acute Toxicity (Oral LD50)**

10470 mg/kg Rat

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##### **Acute Toxicity (Inhalation LC50)**

116.9 mg/l (vapours) Rat 4 hours

REACH dossier information

## SECTION 12: ECOLOGICAL INFORMATION

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## Ecotoxicity

The product is not expected to be hazardous to the environment.

## 12.1. Toxicity

### Ecological information on ingredients.

#### HYDROCHLORIC ACID ...% (CAS: 7647-01-0)

##### **Acute Toxicity - Fish**

LC50 3.25 mg/l *Lepomis macrochirus* (Bluegill)

REACH dossier information

##### **Acute Toxicity - Aquatic Invertebrates**

NOEC 48 hours 5.5 pH *Daphnia magna*

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NOEC 72 hours 5 pH *Chlorella vulgaris*

#### METHANOL (CAS: 67-56-1)

96 hours 15400 mg/l *Lepomis macrochirus* (Bluegill)

REACH dossier information

##### **Acute Toxicity - Aquatic Invertebrates**

EC50 48 hours > 10000 mg/l *Daphnia magna*

REACH dossier information

##### **Acute Toxicity - Aquatic Plants**

EC50 96 hours ~ 22000 mg/l Freshwater algae

REACH dossier information

#### ETHANOL (CAS: 64-17-5)

##### **Acute Toxicity - Fish**

LC50 96 hours 14.2 mg/l *Pimephales promelas* (Fat-head Minnow)

REACH dossier information

##### **Acute Toxicity - Aquatic Invertebrates**

EC50 48 hours 5012 mg/l *Daphnia magna*

REACH dossier information

##### **Acute Toxicity - Aquatic Plants**

EC50 72 hours 275 mg/l Freshwater algae

REACH dossier information

## 12.2. Persistence and degradability

### Degradability

There are no data on the degradability of this product.

### Ecological information on ingredients.

#### HYDROCHLORIC ACID ...% (CAS: 7647-01-0)

##### **Biodegradation**

Scientifically unjustified.

REACH dossier information

#### METHANOL (CAS: 67-56-1)

##### **Biodegradation**

Water Degradation (71.5%) 5 days

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Degradation (95%) 20 days

REACH dossier information

#### ETHANOL (CAS: 64-17-5)

##### **Biodegradation**

Water Degradation (96%) 20 days

REACH dossier information

## 12.3. Bioaccumulative potential

### Bioaccumulative potential

No data available on bioaccumulation.

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## Ecological information on ingredients.

### HYDROCHLORIC ACID ...% (CAS: 7647-01-0)

#### **Bioaccumulation factor**

Scientifically unjustified.

REACH dossier information

#### **12.4. Mobility in soil**

##### **Mobility:**

The product is soluble in water.

#### **12.5. Results of PBT and vPvB assessment**

Not determined.

#### **12.6. Other adverse effects**

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

#### **13.1. Waste treatment methods**

Dispose of waste and residues in accordance with local authority requirements. Recover and reclaim or recycle, if practical.

## SECTION 14: TRANSPORT INFORMATION

#### **14.1. UN number**

UN No. (ADR/RID/ADN)	1170
UN No. (IMDG)	1170
UN No. (ICAO)	1170

#### **14.2. UN proper shipping name**

Proper Shipping Name                      ETHANOL SOLUTION

#### **14.3. Transport hazard class(es)**

ADR/RID/ADN Class	3
ADR/RID/ADN Class	Class 3: Flammable liquids.
ADR Label No.	3
IMDG Class	3
ICAO Class/Division	3
Transport Labels	



#### **14.4. Packing group**

ADR/RID/ADN Packing group	II
IMDG Packing group	II
ICAO Packing group	II

#### **14.5. Environmental hazards**

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## Environmentally Hazardous Substance/Marine Pollutant

No.

### 14.6. Special precautions for user

EMS	F-E, S-D
Emergency Action Code	•2YE
Hazard No. (ADR)	33
Hazard No. (ADR)	33 Highly flammable liquid (flash-point below 23°C).
Tunnel Restriction Code	(D/E)

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

#### Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply.

#### Guidance Notes

Workplace Exposure Limits EH40.

#### EU Legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

### 15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

## SECTION 16: OTHER INFORMATION

#### Revision Comments

Supplier's contact details amended. Reissued according to Regulation (EU) No 453/2010.

Revision Date	11-2011
Revision	3
Supersedes date	02-2010

#### Risk Phrases In Full

R34	Causes burns.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R68/20/21/22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
R11	Highly flammable
R37	Irritating to respiratory system.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

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### Hazard Statements In Full

H370	Causes damage to organs <<Organs>>.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H225	Highly flammable liquid and vapour.
H371	May cause damage to organs <<Organs>>.
H335	May cause respiratory irritation.
H331	Toxic if inhaled.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.

### Disclaimer

The information in this safety data sheet was obtained from current and reliable sources. However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond Pro-Lab Diagnostics control, it is the users responsibility to perform thorough testing of this product when used in combination with any other product. It is suggested that users familiarise themselves with this safety data sheet before handling the product.