

**Section 1. Identification****1.1 Product Identifier** 3731

Product Name HARDNESS INDICATOR (ERIO-CHROME)

CAS Number Mixture

REACH Registration No A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.

**1.2 Relevant identified uses of the substance or mixture & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

**1.3 Supplier** Vickers Laboratories LtdGrangefield Industrial Estate  
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UNITED KINGDOMPhone 44 113 2362811  
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Website www.viclabs.co.uk**1.4 Emergency Telephone** (08:00-16:30) 44 113 2362811  
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(Have this document to hand)**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation (EC) 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720 & UK SI 2020/1567**

Acute toxicity, category 4 (oral)

H302: Harmful if swallowed.

Skin corrosion/irritation, category 2

H315: Causes skin irritation.

Serious eye damage/irritation, category 1

H318: Causes serious eye damage.

Spec target organ tox - repeat, category 2

H373: May cause damage to organs through prolonged or repeated exposure.

**2.2 Label elements****Labelling according to regulation (EC) 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720 & UK SI 2020/1567**

Signal word Danger

Hazard Pictograms



Hazard Statements	Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.
Precautionary Statements	Wear protective gloves / protective clothing / eye protection. Wash thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

## Section 3. Composition

### 3.2 Mixtures

Component	CAS No.	EC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Diethanolamine	111-42-2			80.7%	Acute Tox. 4 (O),Skin Irrit. 2,Eye Dam. 1,STOT RE 2
Ethanol	64-17-5	200-578-6	01-2119457610-43-XXXX	18.4%	Flam. Liq. 2,Eye Irrit. 2
Methanol	67-56-1	200-659-6	01-2119433307-44-XXXX	<1%	Flam. Liq. 2,Acute Tox. 3 (O),Acute Tox. 3 (D),Acute Tox. 3 (I),STOT SE 1

## Section 4. First Aid

### 4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. In severe cases or if exposure has been great, OBTAIN MEDICAL ATTENTION.
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

Extinguishing Media	Water spray, alcohol resistant foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

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

Hazards	Vapour-air mixtures are explosive.
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### 5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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## Section 6. Accidental Release Measures

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

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.
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## 6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

## 6.3 Methods and material for containment and cleaning up

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.

Minor Spillage Wash area down with copious amounts of water.

## 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

# Section 7. Storage & Handling

## 7.1 Precautions for safe handling

All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

## 7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

## 7.3 Specific end use(s)

See section 1.2.

# Section 8. Workplace Exposure & Personal Protection

## 8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)		Short Term 15min period	
Diethanolamine	111-42-2	80.7%	3.0 ppm	-	15.0 ppm	-
Ethanol	64-17-5	18.4%	1000.0 ppm	1920.0 mg/m-3	-	-
Methanol	67-56-1	<1%	200.0 ppm	266.0 mg/m-3	250.0 ppm	333.0 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

## 8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.

Hand Protection Use solvent resistant gloves.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

# Section 9. Physical & Chemical Properties

## 9.1 Information on basic physical and chemical properties

Appearance Black viscous liquid.

Odour Fresh and characteristic.

pH 11 @ 20°C

Boiling Point 269°C

Melting Point 28°C

Flash Point 154.4°C (Closed cup)

Upper Flammable Limit 10%

Lower Flammable Limit 1%

Auto Ignition	Not applicable
Explosive Properties	Slight.
Oxidising Properties	No.
Vapour Pressure	Not applicable
Relative Density	1.0900
Water Solubility	Moderately soluble in water.

## 9.2 Other information

No data available.

## Section 10. Stability & Reactivity

<b>10.1</b> Reactivity	No data available.
<b>10.2</b> Chemical Stability	Stable under normal conditions
<b>10.3</b> Possibility of hazardous reactions	No data available.
<b>10.4</b> Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
<b>10.5</b> Incompatible materials	Mineral acids. Strong oxidising agents.
<b>10.6</b> Hazardous Decomposition Products	Burning will produce toxic fumes of NOx, carbon monoxide and/or carbon dioxide.

## Section 11. Toxicological Information

### 11.1 Information on toxicological effects

Eyes	The liquid or concentrated vapour will cause severe irritation and corneal damage.
Skin	The liquid will be irritating to the skin. May be absorbed through the skin. May cause skin sensitisation.
LD50 Skin	3000mg/kg Rabbit
Ingestion	Moderately toxic by ingestion. Ingestion of large amounts may cause severe internal irritation and damage, nausea, vomiting, abdominal pains and diarrhoea.
LD50 Oral	1410mg/kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits may produce irritation of the eyes and respiratory tract. High concentrations of vapour may cause loss of appetite, dizziness, fatigue and nausea. Liver and kidney damage may also occur.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	Not teratogenic but high doses have caused maternal and foetal toxicity.

## Section 12. Ecological

<b>12.1</b> Toxicity	Readily bio-degraded in the environment.
LC50 Algal	Not available
LC50 Crustacea	Not available
LC50 Fish	Not available
<b>12.2</b> Persistence and degradability	No data available.
<b>12.3</b> Bioaccumulative potential	No data available.
<b>12.4</b> Mobility in soil	No data available.
<b>12.5</b> Results of PBT & vPvB assessment	Assessment not required.
<b>12.6</b> Other adverse effects	None known at present.

## Section 13. Disposal Considerations

### 13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion.

## Section 14. Transport Information

14.1 UN Number	2920
14.2 Proper Shipping Name	Corrosive liquid, flammable, N.O.S. (Diethanolamine, Ethanol)
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	3
Transport category	2
ADR Hazard ID	83
Tunnel Restriction Code	D/E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



## Section 15. Regulatory Information

### 15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE) as amended by GB-CLP Regulation, UK SI 2019/720 & UK SI 2020/1567

Classification Acute toxicity, category 4 (oral); Skin corrosion/irritation, category 2; Serious eye damage/irritation, category 1; Spec target organ tox - repeat, category 2

Signal word Danger

Hazard Pictograms



Hazard Statements H302, H315, H318, H373  
Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements P280, P264, P305+P351+P338, P301+P312, P330  
Wear protective gloves / protective clothing / eye protection. Wash thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

### 15.2 Chemical safety assessment

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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