Revision Date 06/12/2013
Revision 8
Supersedes date 06/10/2010

ILFORD PHOTO
HARMAN technology Ltd

SAFETY DATA SHEET
Ilfotec LC29 Developer

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

1.1. Product identifier

Product name Ilfotec LC29 Developer
Product No. 1131811
Internal Id 10017
Container size 500ml

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

Identified uses Photographic Developer Solution

1.3. Details of the supplier of the safety data sheet

Supplier Distributors
UK: HARMAN technology Ltd, Ilford Way, Mobberley, Cheshire, WA16 7JL, UK Tel: 01565 650000, Fax: 01565 872734. (http://www.harmantechnology.com)
Australia: CR Kennedy & Co Pty Ltd, 663 Chapel Street, South Yarra, Victoria 3141, Australia. Tel: 03 9823 1555, Fax: 03 9827 7216

Contact Person UK: HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email: trevor.rhodes@harmantechnology.com Australia: Contact Distributor (http://www.crkennedy.com.au) Tel +61 (0)3 9823 1555

1.4. Emergency telephone number

Swiss Toxicological Information Centre (24 hours) Tel: +41 (0)1 251 5151, Fax: +41 (0)1 252 8833 E-mail: stic@access.ch, Internet: www.toxi.ch

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xn;R22, R48/22. Carc. Cat. 3;R40, Muta Cat. 3;R68. Xi;R38, R41. R43. N;R50.

2.2. Label elements

Contains DIETHANOLAMINE
HYDROQUINONE

Labelling


Harmful


Dangerous for the environment

Risk Phrases

R22	Harmful if swallowed.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R41	Risk of serious damage to eyes.

R43	May cause sensitisation by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50	Very toxic to aquatic organisms.
R68	Possible risk of irreversible effects.

Safety Phrases

S2	Keep out of the reach of children.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S46	If swallowed, seek medical advice immediately and show this container or label.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

2.3. Other hazards

No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

1-Phenyl-4-methyl-3-pyrazolidone **< 1**

CAS-No.: 2654-57-1 **EC No.: 220-180-6**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Not classified.	Xn;R22,R43.

2,2'-OXYBISETHANOL **5-10%**

CAS-No.: 111-46-6 **EC No.: 203-872-2**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Xn;R22

DIETHANOLAMINE **10-30%**

CAS-No.: 111-42-2 **EC No.: 203-868-0**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Xn;R22,R48/22
Skin Irrit. 2 - H315	Xi;R38,R41
Eye Dam. 1 - H318	
STOT RE 2 - H373	

Diethanolamine Bisulphite **10-30%**

CAS-No.: 63149-47-3 **EC No.: 263-968-5**

Classification (EC 1272/2008)	Classification (67/548/EEC)
EUH031	Xn;R21/22.
Acute Tox. 4 - H302	Xi;R36/38.
Acute Tox. 4 - H312	R31.
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	

Diethanolamine Hydrobromide **1-5%**

CAS-No.: 28129-21-7 **EC No.:**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Xn;R22,R48/22.
Skin Irrit. 2 - H315	Xi;R38,R41.
Eye Dam. 1 - H318	
STOT RE 2 - H373	

Diethylenetriamine Pentaacetic Acid Na5 **1-5%**

CAS-No.: 140-01-2 **EC No.: 205-391-3**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Skin Irrit. 2 - H315	Xi;R36/38.
Eye Irrit. 2 - H319	

HYDROQUINONE **5-10%**

CAS-No.: 123-31-9 **EC No.: 204-617-8**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H302	Carc. Cat. 3;R40
Eye Dam. 1 - H318	Muta. Cat. 3;R68
Skin Sens. 1 - H317	Xn;R22
Muta. 2 - H341	R43
Carc. 2 - H351	Xi;R41
Aquatic Acute 1 - H400	N;R50

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

Composition Comments

Hazardous according to the criteria of Worksafe Australia

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion

Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact

Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Contact physician if irritation continues.

Eye contact

Remove victim immediately from source of exposure. 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. Contact physician if irritation persists.

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

Inhalation

No specific symptoms noted.

Ingestion

No specific symptoms noted.

Skin contact

May cause sensitisation by skin contact.

Eye contact

May cause severe irritation to eyes.

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

No specific first aid measures noted.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

Specific hazards

When heated and in case of fire, harmful vapours/gases may be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours.

Protective equipment for fire-fighters

Use protective equipment appropriate for surrounding materials. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

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. Avoid contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground. The product should not be dumped in nature but collected and delivered according to agreement with the local authorities.

6.3. Methods and material for containment and cleaning up

For waste disposal, see section 13. Small quantities may be flushed to drains with plenty of water. Prevent discharge of larger quantity to drain. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Wash contaminated area with water. Do not let washing down water contaminate ponds or waterways.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide good ventilation. Avoid spilling, skin and eye contact. Do not eat, drink or smoke when using the product. Read and follow manufacturer's recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Store in closed original container in a dry place. Store under well-ventilated conditions at a temperature below 25°C.

Storage Class

Chemical 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

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
2,2'-OXYBISETHANOL	WEL	23 ppm	101 mg/m3			
HYDROQUINONE	WEL		0.5 mg/m3			

WEL = Workplace Exposure Limit.

8.2. Exposure controls

Protective equipment


Engineering measures

Provide adequate ventilation. Must not be handled in confined space without sufficient ventilation.

Respiratory equipment

Respiratory protection not required.

Hand protection

Use protective gloves. Nitrile gloves are recommended.

Eye protection

Use eye protection.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Viscous Liquid
Colour	Clear Colourless to pale yellow.
Odour	No characteristic odour.
Solubility	100% Soluble in water.
Initial boiling point and boiling range (°C)	>100 760 mm Hg
Relative density	1.07 20
pH-Value, Conc. Solution	9.4

9.2. Other information

Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under the prescribed storage conditions. No particular stability concerns.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time. Avoid contact with acids.

10.5. Incompatible materials

Materials To Avoid

Strong acids. Avoid contact with other photographic solutions and/or cleaning compounds.

10.6. Hazardous decomposition products

When heated, toxic and corrosive vapours/gases may be formed. Fire or high temperatures create: Sulphurous gases (SOx). Ammonia or amines.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information

This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components that comprise the mixture.

Other Health Effects

Hydroquinone: Carcinogen Category 3. Mutagen Category 3. ACGIH A3 IARC 3 IARC Animal Carcinogen List. IARC Int. Agency for Cancer Research.

Inhalation

May cause irritation to the respiratory system.

Ingestion

Harmful if swallowed. May cause discomfort if swallowed.

Skin contact

Irritating to skin. May cause sensitisation by skin contact. May cause allergic contact eczema.

Eye contact

Irritation of eyes and mucous membranes. Repeated exposure may cause chronic eye irritation.

Health Warnings

Spray and vapour in the eyes may cause irritation and smarting. May cause allergy. May cause hypersensitivity. Prolonged or repeated exposure may cause severe irritation. May cause skin irritation/eczema. May cause sensitisation by skin contact. Irritating to eyes.

Route of entry

Skin and/or eye contact. Ingestion.

Medical Considerations

May aggravate existing: Skin disorders and allergies. Pre-existing eye problems.

Toxicological information on ingredients.

DIETHANOLAMINE (CAS: 111-42-2)

Toxic Dose 1 - LD 50

620 mg/kg (oral rat)

HYDROQUINONE (CAS: 123-31-9)

Toxic Dose 1 - LD 50

320 mg/kg (oral rat)

Toxic Dose 2 - LD 50

>900 mg/kg (skn-rat)

2,2'-OXYBISETHANOL (CAS: 111-46-6)

Toxic Dose 1 - LD 50

12, 600 mg/kg (oral rat)

Diethylenetriamine Pentaacetic Acid Na5 (CAS: 140-01-2)

Toxic Dose 1 - LD 50

>4000 mg/kg (oral rat)

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

The product contains a substance that is very toxic to aquatic organisms.

Ecological information on ingredients.

DIETHANOLAMINE (CAS: 111-42-2)

LC 50, 96 Hrs, Fish mg/l

>100 mg/L (Fathead Minnow)

HYDROQUINONE (CAS: 123-31-9)

LC 50, 96 Hrs, Fish mg/l

0.10-0.18 (Fathead Minnow)

EC 50, 48 Hrs, Daphnia, mg/l

0.05

IC 50, 72 Hrs, Algae, mg/l

1.0

2,2'-OXYBISETHANOL (CAS: 111-46-6)

LC 50, 96 Hrs, Fish mg/l

>100

EC 50, 48 Hrs, Daphnia, mg/l

0.3 - 1

Diethylenetriamine Pentaacetic Acid Na5 (CAS: 140-01-2)

LC 50, 96 Hrs, Fish mg/l

>1000 (lepomis macrochirus)

EC 50, 48 Hrs, Daphnia, mg/l

>500 (daphnia magna)

12.2. Persistence and degradability

Degradability

There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

12.4. Mobility in soil

Mobility:

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

The disposal process for this product when it becomes waste, depends largely upon how much (volume) waste is generated, where the waste is generated (location) and by whom (whether in a professional or amateur or other capacity). Therefore only outline guidance can be provided. For detailed guidance and specialist advice on the disposal of this product when it becomes waste, please visit the COPPICE web site at http://www.pic.uk.net/coppice/index.htm. The information is relevant to both professional and amateur users.

13.1. Waste treatment methods

Used, diluted, and spent solutions may be allowed to be discharged to sanitary sewer by permit IF allowed by local regulations. Consult your local authority for advice. Waste may have to be pre-treated before discharge. Consult local authorities before discharging any waste to sewer. Do not discharge to septic system. Waste that cannot be discharged to sewer may have to handled by a licensed hazardous waste contractor.

SECTION 14: TRANSPORT INFORMATION

General LIMITED QUANTITY EXEMPTION

14.1. UN number

UN No. (ADR/RID/ADN) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

14.2. UN proper shipping name

Proper Shipping Name UN3082, Environmentally hazardous substance, liquid, n.o.s. (contains hydroquinone).

14.3. Transport hazard class(es)

ADR/RID/ADN Class 9 (M6)

ADR/RID/ADN Class Class 9: Other dangerous substances.

ADR Label No. 9

IMDG Class 9

ICAO Class/Division 9

Transport Labels

14.4. Packing group

ADR/RID/ADN Packing group III

IMDG Packing group III

ICAO Packing group III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

14.6. Special precautions for user

EMS	F-A, S-F
Hazard No. (ADR)	90 Environmentally hazardous substance; miscellaneous dangerous substances.
Tunnel Restriction Code	(E)

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

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply. Worksafe Australia NOHSC 2012: Labelling of workplace substances. Australian Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP). Australian Approved Criteria for Classifying Hazardous Substances (NOHSC 1008). Australian List of Designated Hazardous Substances (NOHSC 10005). Australian National Code of Practice for the Preparation of Material safety Data Sheets (NOHSC 2011)

Guidance Notes

CHIP for everyone HSG(108).

EU Legislation

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. EU COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010.

National Regulations

Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments. Workplace Exposure Limits 2007 (EH40) The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 No 716

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

General information

HARMAN technology Ltd believe the information and recommendations contained herein are based on correct and factual data. However, no express or implied guarantee or warranty of any kind is made with respect to this information. Use this information only to supplement other information you have gathered and then make an independent determination about the completeness and suitability of all information to ensure the proper use and disposal of this product and the health and safety of employees and customers.

Information Sources

European Photographic Chemical Industry Code of Practice For Classification And Labelling Material Safety Data Sheet, Misc. manufacturers. Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax, 1984.

Issued By	HS&E Advisor Dr Trevor Rhodes Tel: +44(0)1565 650000, email: trevor.rhodes@harmantechnology.com
Revision Date	06/12/2013
Revision	8
Supersedes date	06/10/2010

Risk Phrases In Full

R31	Contact with acids liberates toxic gas.
R22	Harmful if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitisation by skin contact.
R68	Possible risk of irreversible effects.
R41	Risk of serious damage to eyes.
R50	Very toxic to aquatic organisms.

Hazard Statements In Full

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
EUH031	Contact with acids liberates toxic gas.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs <<Organs>> through prolonged or repeated exposure.
H351	Suspected of causing cancer.
H341	Suspected of causing genetic defects.
H400	Very toxic to aquatic life.