467491 Lyreco Flipchart Marker B/Tip Red

Lyreco Group (Lyreco France)

Chemwatch:	35-3311	Print Date:	20/11/2013
Version No:	2.1.1.1	Issue Date:	18/04/2013
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)		S.REACH.GBR.EN	

SECTION 1 Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name:	467491 Lyreco Flipchart Marker B/Tip Red
Chemical Name:	Not Applicable
Synonyms:	Product Code: 467491
Proper shipping name:	Not Applicable
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable
EC number:	Not Applicable
Index number:	Not Applicable
REACH registration number:	Not Applicable

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

Relevant identified uses:	Marker pen., NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk.
Uses advised against:	Not Applicable

1.3. Details of the supplier of the safety data sheet

Registered company name:	Lyreco Group (Lyreco France)
Address:	Rue du 19 Mars 1962 Marly 59770 France
Telephone:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)
Fax:	Not Available
Website:	Not Available
Email:	Not Available

1.4. Emergency telephone number

Association / Organisation:	Not Available
Emergency telephone numbers:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)
Other emergency telephone numbers:	+33 3 27 23 64 00 (9a.m-5p.m. CET.)

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Not considered a dangerous mixture according to directive 1999/45/EC, Reg.

ChemWatch Hazard Ratings

		Min	Max
Flammability	1		
Toxicity	0		
Body Contact	0		
Reactivity	1		
Chronic	3		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

DSD classification:

In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations

Not Applicable

Classification according to regulation (EC) No 1272/2008 [CLP]:

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

2.2. Label elements

CLP label elements

Not Applicable

Signal word:	**NOT APPLICABLE**

Hazard statement(s):

Not Applicable

Supplementary statement(s):

Not Applicable

Precautionary statement(s): Prevention

Not Applicable

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

Precautionary statement(s): Response

Not Applicable

Precautionary statement(s): Storage

Not Applicable

Precautionary statement(s): Disposal

Not Applicable

DSD / DPD label elements

Not Applicable

Relevant risk statements are found in section 2.1

Indication(s) of danger:	Not Applicable

Safety advice:

S02	Keep out of reach of children.

2.3. Other hazards

Cumulative effects may result following exposure*.

May be harmful to the foetus/ embryo*.

May affect fertility*.

SECTION 3 Composition / information on ingredients

3.1. Substances

See 'Composition on ingredients' in Section 3.2

3.2. Mixtures

1. CAS No 2. EC No 3. Index No 4. REACH No	%[weight]	Name	Classification according to directive 67/548/EEC [DSD]	Classification according to regulation (EC) No 1272/2008 [CLP]
		ink containing,		
1. 111-46-6 2. 203-872-2 3. 603-140-00-6 4. 01-2119457857-21-XXXX	2.5-10	diethylene glycol	R22[2]	Acute Tox. ; H302[3]
1. 107-21-1 2. 203-473-3 3. 603-027-00-1 4. 01-2119456816-28-XXXX	2.5-10	ethylene glycol	R22[2]	Acute Tox. ; H302[3]
1. 1934-21-0 2. 217-699-5 3. Not Available 4. Not Available	NotSpec.	C.I. Acid Yellow 23	R36/37/38, R42/43[1]	Respiratory Sensitizer Category 1, STOT - SE (Resp. Irr.) Category 3, Eye Irritation Category 2, Skin Corrosion/Irritation Category 2, Skin Sensitizer Category 1; H334, H335, H319, H315, H317[1]
1. Not Available 2. Not Available 3. Not Available 4. Not Available	>60	ingredients, non-hazardous	Not Applicable	Not Applicable

Legend:*1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

SECTION 4 First aid measures

4.1. Description of first aid measures

General:

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.
- If swallowed do **NOT** induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxygen and artificial respiration as needed.
- Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

---------- BASIC TREATMENT ----------

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for shock.
- Monitor and treat, where necessary, for pulmonary oedema.
- Anticipate and treat, where necessary, for seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

---------- ADVANCED TREATMENT ----------

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.

- Drug therapy should be considered for pulmonary oedema.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

---------- EMERGENCY DEPARTMENT ----------

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Acidosis may respond to hyperventilation and bicarbonate therapy.
- Haemodialysis might be considered in patients with severe intoxication.
- Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For C8 alcohols and above. Symptomatic and supportive therapy is advised in managing patients. If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Eye Contact:

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation:

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

Ingestion:

- If swallowed do **NOT** induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxygen and artificial respiration as needed.
- Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

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- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

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- Acidosis may respond to hyperventilation and bicarbonate therapy.
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For C8 alcohols and above.
Symptomatic and supportive therapy is advised in managing patients.

SECTION 5 Firefighting measures

5.1. Extinguishing media

- Alcohol stable foam.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

5.3. Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.

Fire/Explosion Hazard:

- Combustible.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills:

- Remove all ignition sources.

Major Spills:

Moderate hazard.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling

- Limit all unnecessary personal contact.

Fire and explosion protection

See section 5

Other information

- Store in original containers.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container:

- Metal can or drum

Storage incompatibility:

- Avoid strong acids, bases.

Package Material Incompatibilities:

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Derived No Effect Level (DNEL)

Exposure Pattern	Workers	General Population
Long term - dermal, systemic effects	Not Available	Not Available
Long term - inhalation, systemic effects	Not Available	Not Available
Long term - oral, systemic effects	Not Available	Not Available
Long term - dermal, local effects	Not Available	Not Available
Long term - inhalation, local effects	Not Available	Not Available
Short term - dermal, systemic effects	Not Available	Not Available
Short term - inhalation, systemic effects	Not Available	Not Available
Short term - oral, systemic effects	Not Available	Not Available
Short term - dermal, local effects	Not Available	Not Available
Short term - inhalation, local effects	Not Available	Not Available

Predicted No Effect Level (PNEC)

Compartment	Value
Fresh Water	Not Applicable
Marine Water	Not Applicable
Aqua	Not Applicable
Fresh water sediment	Not Applicable
Marine water sediment	Not Applicable
Soil	Not Applicable
STP	Not Applicable
ORAL	Not Applicable

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	diethylene glycol	2,2'-Oxydiethanol	101 (mgm3) / 23 (ppm)	Not Available	Not Available	Not Available
UK Workplace Exposure Limits (WELs)	ethylene glycol	Ethane-1,2-diol particulate / Ethane-1,2-diol vapour	10 (mgm3) / 52 (mgm3) / 20 (ppm)	10 (mgm3) / 4 (mgm3) / 40 (ppm)	Not Available	Sk
European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)	ethylene glycol	Ethylene glycol	52 (mgm3) / 20 (ppm)	104 (mgm3) / 40 (ppm)	Not Available	Skin
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	ethylene glycol	Ethylene glycol	52 (mgm3) / 20 (ppm)	104 (mgm3) / 40 (ppm)	Not Available	Skin

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
diethylene glycol	2.31(ppm)	40(ppm)	200(ppm)	200(ppm)
ethylene glycol	10(ppm)	39.4(ppm)	40(ppm)	60(ppm)

Ingredient	Original IDLH	Revised IDLH
467491 Lyreco Flipchart Marker B/Tip Red	Not Available	Not Available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.

8.2.2. Personal protection

Eye and face protection:

- Safety glasses with side shields

Skin protection:

See Hand protection below

Hand protection:

- Wear chemical protective gloves, e.g. PVC.

Body protection:

See Other protection below

Other protection:

- Overalls.

Thermal hazards:

Recommended material(s):

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
467491 Lyreco Flipchart Marker B/Tip Red

Material	CPI
NITRILE	A

* CPI - Chemwatch Performance Index

Respiratory protection:

Type A-P Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	A-AUS / Class 1 P2	-	A-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	A-2 P2	A-PAPR-2 P2
up to 50 x ES	-	A-3 P2	-
50+ x ES	-	Air-line**	-

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Red liquid with a characteristic odour; mixes with water.

Physical state	Liquid	**Relative density (Water = 1)**	Not Available
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	225 (ignition temp.)
pH (as supplied)	7.5	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	100	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	;	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	53.0	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	0.7	**Volatile Component (%vol)**	Not Available

Vapour pressure (kPa)	2.3	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution(1%)**	Not Available
Vapour density (Air = 1)	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1. Reactivity:

See section 7.2

10.2. Chemical stability:

- Presence of incompatible materials.

10.3. Possibility of hazardous reactions:

See section 7.2

10.4. Conditions to avoid:

See section 7.2

10.5. Incompatible materials:

See section 7.2

10.6. Hazardous decomposition products:

See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Inhaled:

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).

Ingestion:

The material has

Skin Contact:

The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models).

Eye:

Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Chronic:

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

TOXICITY	IRRITATION
467491 Lyreco Flipchart Marker B/Tip Red	
Not Available	Not Available
diethylene glycol	
Dermal (rabbit) LD50: 11890 mg/kg	Eye (rabbit) 50 mg mild
Oral (rat) LD50: 12565 mg/kg	Skin (human): 112 mg/3d-I mild
	Skin (rabbit): 500 mg mild
Not Available	Not Available
ethylene glycol	
Dermal (rabbit) LD50: 9530 mg/kg	Eye (rabbit): 100 mg/1h - mild
Inhalation (rat) LC50: 50100 mg/m3/8 hr	Eye (rabbit): 12 mg/m3/3D
Oral (rat) LD50: 4700 mg/kg	Eye (rabbit): 1440mg/6h-moderate
	Eye (rabbit): 500 mg/24h - mild
	Skin (rabbit): 555 mg(open)-mild
Not Available	Not Available
C.I. Acid Yellow 23	
Intravenous (Rat) LD50: >2000 mg/kg	
Oral (Mouse) LD50: 12750 mg/kg	
Oral (Rat) LD50: >2000 mg/kg	
Not Available	Not Available

* Value obtained from manufacturer's msds

467491 Lyreco Flipchart Marker B/Tip Red

No significant acute toxicological data identified in literature search.

DIETHYLENE GLYCOL

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic).

ETHYLENE GLYCOL

For ethylene glycol:
[Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica] Substance is reproductive effector in rats (birth defects). Mutagenic to rat cells.

C.I. ACID YELLOW 23

The following information refers to contact allergens as a group and may not be specific to this product.
Suspected allergen *[Hawley's]

Acute Toxicity:	Not Applicable	**Carcinogenicity:**	Not Applicable
Skin Irritation/Corrosion:	Not Applicable	**Reproductivity:**	Not Applicable
Serious Eye Damage/Irritation:	Not Applicable	**STOT - Single Exposure:**	Not Applicable
Respiratory or Skin sensitisation:	Not Applicable	**STOT - Repeated Exposure:**	Not Applicable
Mutagenicity:	Not Applicable	**Aspiration Hazard:**	Not Applicable

CMR STATUS

SKIN

ethylene glycol	European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) - Skin	Skin

SECTION 12 Ecological information

12.1. Toxicity

DO NOT

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

12.4. Mobility in soil

Ingredient	Mobility
Not Available	Not Available

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT and vPvB Criteria fulfilled?	Not Available	Not Available	Not Available

12.6. Other adverse effects

No data available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal:

- Recycle wherever possible or consult manufacturer for recycling options.

Waste treatment options:

Sewage disposal options:

No relevant data

SECTION 14 Transport information

Labels Required:

Marine Pollutant: NO

HAZCHEM:

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Available	**14.4. Packing group**	Not Available
14.2. UN proper shipping name	Not Applicable	**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	Class: Subrisk:	**14.6. Special precautions for user**	Hazard identification (Kemler) Classification code Hazard Label Special provisions limited quantity

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Available	**14.4. Packing group**	Not Available
14.2. UN proper shipping name		**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	ICAO/IATA Class: ICAO / IATA Subrisk: ERG Code:	**14.6. Special precautions for user**	Special provisions: Cargo Only Packing Instructions: Cargo Only Maximum Qty / Pack: Passenger and Cargo Packing Instructions: Passenger and Cargo Maximum Qty / Pack: Passenger and Cargo Limited Quantity Packing Instructions: Passenger and Cargo Maximum Qty / Pack:

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Available	**14.4. Packing group**	Not Available
14.2. UN proper shipping name		**14.5. Environmental hazard**	No relevant data
14.3. Transport hazard class(es)	IMDG Class: IMDG Subrisk:	**14.6. Special precautions for user**	EMS Number: Special provisions: Limited Quantities:

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Available	**14.4. Packing group**	Not Available
14.2. UN proper shipping name		**14.5. Environmental hazard**	No relevant data

14.3. Transport hazard class(es)	:	**14.6. Special precautions for user**	Classification code Limited quantity Equipment required Fire cones number

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category	Residual Concentration - Outside Special Area (% w/w)	Residual Concentratio
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	diethylene glycol	Not Available	Not Available	Not Available
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	ethylene glycol	Not Available	Not Available	Not Available

SECTION 15 Regulatory information

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

diethylene glycol(111-46-6) is found on the following regulatory lists

"GESAMP/EHS Composite List - GESAMP Hazard Profiles","FisherTransport Information","Sigma-AldrichTransport Information","Acros Transport Information","OSPAR National List of Candidates for Substitution – Norway","IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances","International Fragrance Association (IFRA) Survey: Transparency List","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","IMO IBC Code Chapter 18: List of products to which the Code does not apply","UK Workplace Exposure Limits (WELs)","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","EU Cosmetic Directive 76/768/EEC Annex III Part 1: List of Substances which Cosmetic Products must not contain except subject to the restrictions and conditions laid down (English)","EU Cosmetic Directive 76/768/EEC Annex II: List of Substances which must not form part of the Composition of Cosmetic Products (English)","Europe SCCNFP First Update of the Inventory of Ingredients Employed in Cosmetic Products - Section II: Perfume and Aromatic Raw Materials","European Union (EU) Inventory of Fragrance Ingredients (Perfume and Aromatic Raw Materials)","Europe Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food - Annex I: Substances","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","Europe Substances Listed in EU Directives on Plastics in Contact with Food","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","Chemwatch Candidate List of Very High Concern - List of Substance Subject to Authorization","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe ECHA Registered Substances - Classification and Labelling - GHS","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III","IMO IBC Code Chapter 17: Summary of minimum requirements"

ethylene glycol(107-21-1) is found on the following regulatory lists

"IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO","GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","FisherTransport Information","Sigma-AldrichTransport Information","International Fragrance Association (IFRA) Survey: Transparency List","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","IMO IBC Code Chapter 17: Summary of minimum requirements","UK Workplace Exposure Limits (WELs)","Europe ECHA Registered Substances - Classification and Labelling - DSD-DPD","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","Europe Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food - Annex I: Substances","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","Europe Substances Listed in EU Directives on Plastics in Contact with Food","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","Europe European Chemicals Agency (ECHA) REACH Registration Numbers","Europe European Chemicals Agency (ECHA) List of substances identified for registration in 2010","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","Chemwatch Candidate List of Very High Concern - List of Substance Subject to Authorization","Europe European Chemicals Agency (ECHA) List of Registered Phase-in Substances","Europe European Chemicals Agency (ECHA) List of Registered Substances","Europe ECHA Registered Substances - Classification and Labelling - GHS","EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)","IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Land Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III","OSPAR National List of Candidates for Substitution – Norway","International Numbering System for Food Additives"

C.I. Acid Yellow 23(1934-21-0) is found on the following regulatory lists

"FisherTransport Information","Sigma-AldrichTransport Information","International Fragrance Association (IFRA) Survey: Transparency List","International Numbering System for Food Additives","EU List of hair dye substances with an updated safety file","EU List of positively assessed hair dye substances by the Scientific Committee on Consumer Products (SCCP)","European Union Register of Feed Additives pursuant to Regulation (EC) No 1831/2003 - Annex I: List of Additives","European Union (EU) Regulation (EC) No 1333/2008 on food additives - Annex V","EU Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products - Annex IV List of Colorants Allowed in Cosmetic Products","EU Cosmetic Directive 76/768/EEC Annex IV Part 1: List of Colouring Agents Allowed for Use in Cosmetic Products (Danish)","EU approved additives","EU Cosmetic Directive 76/768/EEC Annex IV Part 1: List of Colouring Agents Allowed for Use in Cosmetic Products (English)","European Chemical Agency (ECHA) Classification & Labelling Inventory - Notified classification and labelling according to CLP criteria","European Union (EU) Inventory of Ingredients used in Cosmetic Products","European Chemical Agency (ECHA) Classification & Labelling Inventory - Chemwatch Harmonised classification","FEMA Generally Recognized as Safe (GRAS) Flavoring Substances 24 - Primary Names and Synonyms","UK The Environmental Protection (Prescribed Processes and Substances) Regulations 1991 - Release into Air Prescribed Substances","European Union (EU) Directive 2008/1/EC concerning integrated pollution prevention and control, Annex III"

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
diethylene glycol	111-46-6	603-140-00-6	01-2119457857-21-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
2	**Acute Tox. 4, STOT RE 2, Eye Irrit. 2, Skin Irrit. 2**	**Wng, GHS08, Dgr**	**H302, H373, H319, H315**
1	**Acute Tox. 4**	**GHS07, Wng**	**H302**

Ingredient	CAS number	Index No	ECHA Dossier
ethylene glycol	107-21-1	603-027-00-1	01-2119456816-28-XXXX
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**
1	**Acute Tox. 4**	**GHS07, Wng**	**H302**
2	**Acute Tox. 4, STOT RE 2, Skin Irrit. 2, Not Classified, Muta. 1B, Repr. 1B, STOT SE 1, STOT RE 1, Aquatic Chronic 3, Eye Irrit. 2**	**Wng, GHS08, Dgr**	**H302, H319, H332, H340, H360, H370, H372, H412, H315**

Ingredient	CAS number	Index No	ECHA Dossier
C.I. Acid Yellow 23	1934-21-0	Not Available	Not Available
Harmonisation (C&L Inventory)	**Hazard Class and Category Code(s)**	**Pictograms Signal Word Code(s)**	**Hazard Statement Code(s)**

2	**Not Classified, Skin Sens. 1, Resp. Sens. 1, Repr. 2, Aquatic Chronic 2**	**GHS08, Dgr, Wng, GHS09**	**H317, H334, H361, H411**
1	**Not Classified**	**GHS08, Dgr, Wng, GHS09**	**H317, H334, H361, H411**

SECTION 16 Other information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards: