

SAFETY DATA SHEET

Lactophenol Cotton Blue

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name Lactophenol Cotton Blue
Product number PL.7054,PL.7055

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

Identified uses Laboratory reagent.
Uses advised against No specific uses advised against are identified.

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

Emergency telephone +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

Physical hazards Not Classified
Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Muta. 2 - H341 STOT RE 2 - H373
Environmental hazards Aquatic Chronic 3 - H412

Classification (67/548/EEC or 1999/45/EC) Xn; R48/20/21/22, R20/22. C; R34. Muta. Cat. 3 R68. R52/53

2.2. Label elements

Pictogram



Signal word

Danger

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
 H314 Causes severe skin burns and eye damage.
 H341 Suspected of causing genetic defects.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H412 Harmful to aquatic life with long lasting effects.

Lactophenol Cotton Blue

Precautionary statements	<p>P270 Do not eat, drink or smoke when using this product.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective clothing, gloves, eye and face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P310 Immediately call a POISON CENTER/doctor.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P501 Dispose of contents/container in accordance with national regulations.</p>
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Contains lactic acid, phenol

Supplementary precautionary statements	<p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe vapour/spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p>
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2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Glycerol	25 - <50%
CAS number: 56-81-5	EC number: 200-289-5
Substance with National workplace exposure limits.	
Classification	Classification (67/548/EEC or 1999/45/EC)
Not Classified	---
Lactic acid	10 - <25%
CAS number: 50-21-5	EC number: 200-018-0
Classification	Classification (67/548/EEC or 1999/45/EC)
Skin Irrit. 2 - H315	Xi; R41, R38
Eye Dam. 1 - H318	

Lactophenol Cotton Blue

Phenol	10 - <25%
CAS number: 108-95-2	EC number: 203-632-7
Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 3 - H301	T; R23/24/25. Xn; R48/20/21/22. C; R34. Muta. Cat. 3 R68.
Acute Tox. 3 - H311	N; R51/53
Acute Tox. 3 - H331	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Muta. 2 - H341	
STOT RE 2 - H373	
Aquatic Chronic 2 - H411	

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

General information	Keep affected person away from heat, sparks and flames.
Inhalation	Immediate first aid is imperative. Loosen tight clothing such as collar, tie or belt. Maintain an open airway. Move affected person to fresh air at once. Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. If in doubt, get medical attention promptly.
Skin contact	Rinse cautiously with water for several minutes. Remove contaminated clothing. Continue to rinse for at least 15 minutes and get medical attention. Wash contaminated clothing before reuse. Chemical burns must be treated by a physician.
Eye contact	Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water. Get medical attention if symptoms are severe or persist after washing.

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

Inhalation	Symptoms following overexposure may include the following: Coughing, chest tightness, feeling of chest pressure. Drowsiness, dizziness, disorientation, vertigo. May cause discomfort.
Ingestion	Burning sensation in mouth. Coughing. Gastrointestinal symptoms, including upset stomach.
Skin contact	This product is corrosive. May cause serious chemical burns to the skin. Pain.
Eye contact	Causes serious eye damage. Conjunctivitis, irritation, tearing. Pain. Profuse watering of the eyes. Vapour or spray in the eyes may cause irritation and smarting.

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

Notes for the doctor	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Lactophenol Cotton Blue

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products None at ambient temperatures. Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrous gases (NO_x). Sulphurous gases (SO_x).

5.3. Advice for firefighters

Protective actions during firefighting Fight fire from safe distance or protected location. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.

Special protective equipment for firefighters Use air-supplied respirator, gloves and protective goggles. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Contain spillage with sand, earth or other suitable non-combustible material. The product contains substances which are water-soluble and may spread in water systems.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take care as floors and other surfaces may become slippery. Contain spillage with sand, earth or other suitable non-combustible material. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid breathing vapours. Avoid contact with eyes and prolonged skin contact.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep at temperature not exceeding 20°C.

7.3. Specific end use(s)

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

Occupational exposure limits

Lactophenol Cotton Blue

Glycerol

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ mist

Phenol

Long-term exposure limit (8-hour TWA): WEL 2 ppm 7.8 mg/m³

Short-term exposure limit (15-minute): WEL 4 ppm 16 mg/m³

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls

Avoid inhalation of vapours and spray/mists. Good general ventilation should be adequate to control worker exposure to airborne contaminants. In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Frequent changes are recommended. The breakthrough time for any glove material may be different for different glove manufacturers.

Other skin and body protection

Wear anti-static protective clothing if there is a risk of ignition from static electricity.

Hygiene measures

Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Seek advice from supervisor on the company's respiratory protection standards. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Blue.
Odour	Alcoholic.
pH	Not relevant.
Melting point	Not relevant.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.

Lactophenol Cotton Blue

Vapour density	Not relevant.
Relative density	Not determined.
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Acids. Alkalis. Oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Acids. Alkalis. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrous gases (NO_x). Hydrocarbons. Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 3,300.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Acute Tox. 4 - H332 Harmful if inhaled.

ATE inhalation (gases ppm) 19,463.9083528

Lactophenol Cotton Blue

ATE inhalation (vapours mg/l) 15.0

Skin corrosion/irritation

Animal data Skin Corr. 1B - H314 Causes severe skin burns and eye damage.

Serious eye damage/irritation

Serious eye damage/irritation Eye Dam. 1 - H318 Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Muta. 2 - H341 Suspected of causing genetic defects.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 2 - H371

Specific target organ toxicity - repeated exposure

STOT - repeated exposure STOT RE 2 - H373

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Toxicological information on ingredients.

Lactic acid

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,543.0

Species Rat

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 3,543.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ - > 2000 mg/kg REACH dossier information.

Skin corrosion/irritation

Animal data Skin Irrit. 2 - H315 Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.03 ml, 10 seconds, Rabbit REACH dossier information. Eye Dam. 1 - H318 Causes serious eye damage.

Skin sensitisation

Skin sensitisation Buehler test - Rabbit: Not sensitising. REACH dossier information.

Lactophenol Cotton Blue

Phenol

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 3 - H301 Toxic if swallowed.

ATE oral (mg/kg) 100.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 660.0

Species Rat

Notes (dermal LD₅₀) REACH dossier information. Acute Tox. 3 - H311 Toxic in contact with skin.

ATE dermal (mg/kg) 660.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Acute Tox. 3 - H331 Toxic if inhaled.

ATE inhalation (vapours mg/l) 3.0

Skin corrosion/irritation

Animal data Dose: 0.5 g, 24 hours, Rabbit Erythema/eschar score: Severe erythema (beef redness) to eschar formation preventing grading of erythema (4). REACH dossier information. Corrosive.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 100 mg, < 14 days, Rabbit REACH dossier information. Corrosive to skin. Corrosivity to eyes is assumed.

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Positive. REACH dossier information. May induce heritable mutations in the germ cells of humans.

Carcinogenicity

Carcinogenicity NOAEL 5000 ppm, Oral, Mouse REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Two-generation study - NOAEL 1000 mg/l, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development Developmental toxicity:, Maternal toxicity: - NOAEL: 140 mg/kg/day, Oral, Mouse No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.

Lactophenol Cotton Blue

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Aquatic Chronic 3 - H412 Harmful if inhaled.

Ecological information on ingredients.

Lactic acid

Acute toxicity - fish	LC ₅₀ , 96 hours: 130 mg/l, <i>Onchorhynchus mykiss</i> (Rainbow trout) REACH dossier information.
Acute toxicity - aquatic invertebrates	NOEC, 48 hours: 180 mg/l, <i>Daphnia magna</i> EC ₅₀ , 48 hours: 250 mg/l, <i>Daphnia magna</i> REACH dossier information.
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 2800 mg/l, <i>Pseudokirchneriella subcapitata</i> REACH dossier information.
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: > 100 mg/l, Activated sludge REACH dossier information.

Phenol

Toxicity	Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.
Acute toxicity - fish	LC ₅₀ , 14 days: 21.93 mg/l, <i>Poecilia reticulata</i> (Guppy)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 3.1 mg/l, <i>Ceriodaphnia dubia</i>
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 61.1 mg/l, <i>Pseudokirchneriella subcapitata</i>
Chronic toxicity - fish early life stage	NOEC, 60 days: 0.077 mg/l, <i>Cirrhina mrigala</i>
Chronic toxicity - aquatic invertebrates	NOEC, 16 days: 0.16 mg/l, <i>Daphnia magna</i>

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

Lactic acid

Phototransformation	Air - DT ₅₀ : 1.8 days REACH dossier information.
Biodegradation	Water - Degradation (50%): 5 days Water - Degradation (67%): 20 days REACH dossier information. Readily biodegradable but failing the 10-day window.

Phenol

Lactophenol Cotton Blue

Phototransformation Air - DT₅₀ : 14 hours

Biodegradation Water - Degradation 80.1%: 50 days

12.3. Bioaccumulative potential

Bioaccumulative potential Not determined.

Partition coefficient Not determined.

Ecological information on ingredients.

Phenol

Bioaccumulative potential BCF: 17.5, Brachydanio rerio (Zebra Fish)

Partition coefficient log Pow: 1.47

12.4. Mobility in soil

Mobility The product contains organic solvents which will evaporate easily from all surfaces. The product contains substances which are water-soluble and may spread in water systems.

Ecological information on ingredients.

Lactic acid

Henry's law constant 0.000000113 atm m³/mol REACH dossier information. QSAR model

Surface tension 70.7 mN/m @ 20°C REACH dossier information.

Phenol

Adsorption/desorption coefficient Soil - Koc: 14-26 @ 25°C

Henry's law constant 0.022 Pa m³/mol @ 20°C

Surface tension 71.3 mN/m @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not relevant.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Confirm disposal procedures with environmental engineer and local regulations. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out.

Disposal methods Do not empty into drains. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Collect and place in suitable waste disposal containers and seal securely. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

Lactophenol Cotton Blue

14.1. UN number

UN No. (ADR/RID)	3267
UN No. (IMDG)	3267
UN No. (ICAO)	3267
UN No. (ADN)	3267

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (phenol)
Proper shipping name (IMDG)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (phenol)
Proper shipping name (ICAO)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (phenol)
Proper shipping name (ADN)	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (phenol)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C7
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

Lactophenol Cotton Blue

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). EH40/2005 Workplace exposure limits.
EU legislation	Council Directive of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers (75/324/EEC). 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 (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008	Acute Tox. 4 - H302, Acute Tox. 4 - H332, Skin Corr. 1B - H314, Eye Dam. 1 - H318, Muta. 2 - H341, STOT RE 2 - H373, Aquatic Chronic 3 - H412: Calculation method.
Revision comments	Classification according to EC 1272/2008 (CLP).
Revision date	09/04/2015
Revision	7
Supersedes date	01/11/2012
SDS number	804
Risk phrases in full	R20/22 Harmful by inhalation and if swallowed. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R38 Irritating to skin. R41 Risk of serious damage to eyes. R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R68 Possible risk of irreversible effects.

Lactophenol Cotton Blue

Hazard statements in full

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H341 Suspected of causing genetic defects.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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.