SAFETY DATA SHEET
LCD CLEANER

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

1.1. Product identifier
Product name LCD CLEANER

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Cleaning agent.
Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet
Supplier GARDX INTERNATIONAL LTD
UNIT 7 CLOVELLY BUSINESS PARK
CLOVELLY ROAD
SOUTHBOURNE, EMSWORTH
HANTS
PO10 8PE
+44 (0)1243 376426
product@gardx.co.uk

1.4. Emergency telephone number
Emergency telephone +44 (0) 777 8505 330 (24 hrs).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Not Classified
Health hazards Skin Sens. 1 - H317
Environmental hazards Not Classified

2.2. Label elements
Hazard pictograms

Warning

Hazard statements H317 May cause an allergic skin reaction.
Precautionary statements P102 Keep out of reach of children.
P101 If medical advice is needed, have product container or label at hand.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with national regulations.

Contains 2-METHYL-2H-ISOTHIAZOL-3-ONE

Detergent labelling < 5% anionic surfactants, < 5% cationic surfactants, < 5% non-ionic surfactants, Contains N-(3-aminopropyl)-N-dodecynepropane-1,3-diamine, METHYLISOTHIAZOLINONE, 1,2-BENZOISOTHIAZOL-3(2H)-ONE

2.3. Other hazards

1/10
**LCD CLEANER**

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

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<table>
<thead>
<tr>
<th>ISO-BUTANOL</th>
<th>&lt;1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 78-83-1</td>
<td>EC number: 201-148-0</td>
</tr>
</tbody>
</table>

**Classification**
- Flam. Liq. 3 - H226
- Skin Irrit. 2 - H315
- Eye Dam. 1 - H318
- STOT SE 3 - H335, H336

<table>
<thead>
<tr>
<th>2-METHYL-2H-ISOTHIAZOL-3-ONE</th>
<th>&lt;1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 2682-20-4</td>
<td>EC number: 220-239-6</td>
</tr>
<tr>
<td>M factor (Acute) = 10</td>
<td>M factor (Chronic) = 1</td>
</tr>
</tbody>
</table>

**Classification**
- Acute Tox. 3 - H301
- Acute Tox. 3 - H311
- Acute Tox. 2 - H330
- Skin Corr. 1B - H314
- Eye Dam. 1 - H318
- Skin Sens. 1A - H317
- STOT SE 3 - H335
- Aquatic Acute 1 - H400
- Aquatic Chronic 1 - H410

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**
Show this Safety Data Sheet to the medical personnel.

**Inhalation**
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

**Ingestion**
Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.

**Skin contact**
Rinse with water.

**Eye contact**
Rinse cautiously with water for several minutes. Remove any contact lenses and open eyelids wide apart. Continue to rinse. Get medical attention if symptoms are severe or persist after washing.

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

**Inhalation**
Coughing, chest tightness, feeling of chest pressure.

**Ingestion**
Gastrointestinal symptoms, including upset stomach.

**Skin contact**
Prolonged and frequent contact may cause redness and irritation.
LCD CLEANER

Eye contact May cause discomfort.

4.3. Indication of any immediate medical attention and special treatment needed
Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO2).

5.3. Advice for firefighters
Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Do not touch or walk into spilled material. Avoid contact with skin, eyes and clothing. Take care as floors and other surfaces may become slippery. Do not handle broken packages without protective equipment. Avoid contact with contaminated tools and objects. Wash thoroughly after dealing with a spillage.

6.2. Environmental precautions
Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections
Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions Wear protective gloves. Avoid contact with skin, eyes and clothing. Avoid breathing spray. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions Store at temperatures between 4°C and 40°C.
Storage class Chemical storage.

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
LCD CLEANER

8.1. Control parameters

Occupational exposure limits

ISO-BUTANOL

Long-term exposure limit (8-hour TWA): WEL 50 ppm 154 mg/m³
Short-term exposure limit (15-minute): WEL 75 ppm 231 mg/m³
WEL = Workplace Exposure Limit

DIPROPYLENE GLYCOL n-BUTYL ETHER (CAS: 29911-28-2)

DNEL
- Professional - Dermal; Long term systemic effects: 3 mg/kg/day
- Professional - Inhalation; Long term systemic effects: 10 mg/m³
- Consumer - Dermal; Long term systemic effects: 1.1 mg/kg/day
- Consumer - Inhalation; Long term systemic effects: 1.2 mg/m³
- Consumer - Oral; Long term systemic effects: 7.5 mg/kg/day

PNEC
- Fresh water; 0.519 mg/l
- marine water; 0.0519 mg/l
- Sediment (Freshwater); 2.96 mg/kg
- Soil; 0.287 mg/kg
- STP; 100 mg/l
- Sediment (Marinewater); 0.296 mg/kg
- Intermittent release; 5.19 mg/l

SODIUM LAUROYL SARCOSINATE (CAS: 137-16-6)

DNEL
- Consumer - Dermal; : 0.34 mg/kg/day
- Industry - Dermal; : 3.43 mg/kg/day
- Professional - Dermal; : 3.43 mg/kg/day
- Consumer - Inhalation; : 0.01 mg/m³
- Industry - Inhalation; : 0.1 mg/m³
- Professional - Inhalation; : 0.5 mg/m³

PNEC
- Consumer - Fresh water; 0.0297 mg/l
- Consumer - marine water; 0.003 mg/l
- Consumer - Soil; 0.012 mg/kg
- Consumer - STP; >10 mg/l
- Consumer - Sediment (Freshwater); 0.034 mg/kg
- Consumer - Sediment (Marinewater); 0.0034 mg/kg

C13-15 ALCOHOL ETHOXYLATE 11EO (CAS: 157627-86-6)

DNEL
- General population - Oral; Long term systemic effects: 25 mg/kg/day
- General population - Dermal; Long term systemic effects: 1250 mg/kg/day
- General population - Inhalation; Long term systemic effects: 87 mg/m³
- Workers - Dermal; Long term systemic effects: 2080 mg/kg/day

ISO-BUTANOL (CAS: 78-83-1)

DNEL
- Industry - Inhalation; Long term : 310 mg/m³
- Consumer - Inhalation; Long term : 55 mg/m³
- Consumer - Oral; Long term : 25 mg/kg/day
LCD CLEANER

PNEC
- Fresh water; 0.4
- Marine water; 0.04 mg/l
- Sediment; 1.52 mg/l
- Soil; 0.0699 mg/kg
- STP; 10 mg/kg
- Intermittent release; 11 mg/l
- Sediment (Freshwater); 1.52 mg/kg
- Sediment (Marine water); 0.152 mg/kg

8.2. Exposure controls

Protective equipment

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166.

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. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 4 hours. The breakthrough time for any glove material may be different for different glove manufacturers. When used with mixtures, the protection time of gloves cannot be accurately estimated. Wear protective gloves made of the following material: Neoprene. Nitrile rubber. Rubber (natural, latex). Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. Protective gloves should have a minimum thickness of 0.15 mm. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application.

Hygiene measures
Wash hands thoroughly after handling.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Clear liquid.

Colour
Light (or pale). Straw.

Odour
Mild.

pH
pH (concentrated solution): 7.0

Relative density
1.00 @ 25°C

Solubility(ies)
Soluble in water.

9.2. Other information

Other information
Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity
LCD CLEANER

Reactivity

There are no known reactivity hazards associated with this product.

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

Not determined.

10.4. Conditions to avoid

Conditions to avoid

There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid

No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products

Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 1,100.0

Inhalation

Coughing, chest tightness, feeling of chest pressure.

Ingestion

Gastrointestinal symptoms, including upset stomach.

Skin contact

Prolonged and frequent contact may cause redness and irritation.

Eye contact

May cause discomfort.

Toxicological information on ingredients.

DIPROPYLENE GLYCOL n-BUTYL ETHER

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,700.0

Species

Rat

ATE oral (mg/kg) 3,700.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,001.0

Species

Rat

SODIUM LAUROYL SARCOSINATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,001.0
LCD CLEANER

Species          Rat
ATE oral (mg/kg) 5,001.0

C13-15 ALCOHOL ETHOXYLATE 11EO

Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg) 2,000.0
Species          Rat
ATE oral (mg/kg) 2,000.0

Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg) 2,001.0
Species          Rat

ISO-BUTANOL

Acute toxicity - oral
Acute toxicity oral (LD₅₀ mg/kg) 2,830.0
Species          Rat
ATE oral (mg/kg) 2,830.0

Acute toxicity - dermal
Acute toxicity dermal (LD₅₀ mg/kg) 2,460.0
Species          Rabbit
ATE dermal (mg/kg) 2,460.0

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 24.6
Species          Rat
ATE inhalation (dusts/mists mg/l) 24.6

SECTION 12: Ecological information

Ecotoxicity
Not regarded as dangerous for the environment.

12.1. Toxicity

Acute aquatic toxicity
Not determined.

Ecological information on ingredients.

DIPROPYLENE GLYCOL n-BUTYL ETHER

Acute aquatic toxicity
º LCD CLEANER

Acute toxicity - fish  
LC50, 96 hours: 841 mg/l, Poecilia reticulata (Guppy)

Acute toxicity - aquatic invertebrates  
EC₅₀, 48 hours: > 1000 mg/l, Daphnia magna

º SODIUM LAUROYL SARCOSINATE

Acute aquatic toxicity  
Acute toxicity - fish  
LC50, 96 hours: 107 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates  
EC₅₀, 48 hours: 29.7 mg/l, Daphnia magna

º C13-15 ALCOHOL ETHOXYLATE 11EO

Acute aquatic toxicity  
Acute toxicity - fish  
LC50, 96 hours: 1 - 10 mg/l,

Acute toxicity - aquatic invertebrates  
EC₅₀, 48 hours: 1 - 10 mg/l, Daphnia magna

º ISO-BUTANOL

Acute aquatic toxicity  
Acute toxicity - fish  
LC50, 96 hours: 1430 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates  
EC₅₀, 48 hours: 1100 mg/l, Daphnia magna

Acute toxicity - aquatic plants  
EC₅₀, 72 hours: 1799 mg/l, Selenastrum capricornutum

Acute toxicity - microorganisms  
NOEC, >: > 1000 mg/l, Activated sludge

Chronic aquatic toxicity  
Chronic toxicity - aquatic invertebrates  
NOEC, 21 days: 20 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability  The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential  The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

Mobility  Soluble in water.

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 determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
LCD CLEANER

Disposal methods
Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

General
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Special Provisions note

14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not applicable.

14.3. Transport hazard class(es)

Transport labels
No transport warning sign required.

14.4. Packing group
Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

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

SECTION 15: Regulatory information

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

National regulations
Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation

Guidance
Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

SECTION 16: Other information
LCD CLEANER

**Abbreviations and acronyms used in the safety data sheet**

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
GHS: Globally Harmonized System.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very Persistent and Very Bioaccumulative.
EC₅₀: 50% of maximal Effective Concentration.
UN: United Nations.

**Classification abbreviations and acronyms**

Flam. Liq. = Flammable liquid
Skin Irrit. = Skin irritation
Eye Dam. = Serious eye damage
STOT SE = Specific target organ toxicity-single exposure

**Revision comments**

NOTE: Lines within the margin indicate significant changes from the previous revision.

**Revision date**
19/03/2019

**Revision**
1.0

**SDS number**
29715

**Hazard statements in full**

H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.