

# Safety Data Sheet



## Hazardous, Dangerous Goods

### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Flexol E**

#### Synonyms

Denatured Ethanol  
Flexol E1  
Flexol E3  
Flexol E5  
Flexol E10  
Flexol E50  
Flexol E75  
Reducer E/EA 50/50

#### Product Code

**Recommended use:** General printing industry solvent

**Supplier:** Wilmar BioEthanol (Australia) Pty. Ltd.  
**ABN:** 85 009 660 191  
**Street Address:** 265 Whitehall St  
Yarraville, Victoria 3013  
**Telephone:** +61 3 9283 4850 or 1800 819 618 (applicable in Australia only)  
**Facsimile:** + 61 3 8660 2839 or 1800 647 260 (applicable in Australia only)  
**Email:** bioethanol@wilmar.com.au

**Emergency Telephone number:** 1800 161 321 (available in Australia only)

### 2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia.



#### Signal Word

Danger

#### Hazard Classifications

Flammable Liquids - Category 2  
Serious Eye Damage/Irritation - Category 2A  
Specific Target Organ Toxicity (Single Exposure) - Category 3 Narcotic Effects

#### Hazard Statements

H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

#### Prevention Precautionary Statements

P102 Keep out of reach of children.  
P103 Read label before use.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical, ventilating, lighting and all other equipment.

# Safety Data Sheet



- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing dust, fume, gas, mist, vapours or spray..
- P264 Wash hands, face and all exposed skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective clothing, gloves, eye/face protection and suitable respirator.

## Response Precautionary Statements

- P101 If medical advice is needed, have product container or label at hand.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTRE or doctor/physician if you feel unwell.

## Storage Precautionary Statements

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

## Disposal Precautionary Statement

- P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

**Poison Schedule:** Not Applicable

## DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

**Dangerous Goods Class:** 3

## 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Ethanol	64-17-5	25 - 99 % (w/w)
Ethyl acetate	141-78-6	1 - 75 % (w/w)
		100%

## 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**Inhalation:** Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Skin Contact:** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical

# Safety Data Sheet



assistance.

**Eye contact:** If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor; or for at least 15 minutes and transport to Doctor or Hospital.

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

**PPE for First Aiders:** Wear safety shoes, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**Notes to physician:** Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Hazchem Code:** •3YE

**Suitable extinguishing media:** If material is involved in a fire use alcohol resistant foam or dry agent (carbon dioxide, dry chemical powder).

**Specific hazards:** Highly flammable liquid and vapour. May form flammable vapour mixtures with air. Flameproof equipment necessary in area where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapour may travel a considerable distance to source of ignition and flash back. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke.

**Fire fighting further advice:** Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

## 6. ACCIDENTAL RELEASE MEASURES

### SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

### LARGE SPILLS

If safe to do so, shut off all possible sources of ignition. Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use a spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

**Dangerous Goods - Initial Emergency Response Guide No:** 14

## 7. HANDLING AND STORAGE

# Safety Data Sheet



**Handling:** Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour, mist or aerosols.

**Storage:** Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Class 3 Flammable Liquid as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### National occupational exposure limits:

	TWA		STEL		NOTICES
	ppm	mg/m3	ppm	mg/m3	
Ethyl acetate	200	720	400	1440	-
Ethyl alcohol	1000	1880	-	-	-

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

**Engineering Measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator. Vapour heavier than air - prevent concentration in hollows or sumps. Do NOT enter confined spaces where vapour may have collected.

**Personal Protection Equipment:** SAFETY SHOES, OVERALLS, GLOVES, CHEMICAL GOGGLES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear safety shoes, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

# Safety Data Sheet



**Hygiene measures:** Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Liquid
<b>Colour:</b>	Clear colourless
<b>Odour:</b>	Characteristic
<b>Solubility:</b>	Soluble in water
<b>Specific Gravity:</b>	Approx. 0.8
<b>Relative Vapour Density (air=1):</b>	1.59 - 3.0
<b>Vapour Pressure (20 °C):</b>	5.9 - 9.7kPa @ 20°C
<b>Flash Point (°C):</b>	13 (ethanol) (Abel CC), 7.2 (ethyl acetate) (TOC)
<b>Flammability Limits (%):</b>	2.0 - 3.5 - 11.4 - 19
<b>Autoignition Temperature (°C):</b>	392 - 427
<b>Melting Point/Range (°C):</b>	-117 to -83.6
<b>Boiling Point/Range (°C):</b>	78 (ethanol)
<b>pH:</b>	N App
<b>Viscosity:</b>	N Av
<b>Evaporation Rate (n-Butyl acetate=1):</b>	2.53 - 4.8
<b>Total VOC (g/Litre):</b>	100% (Green Building Council of Australia)
<b>Odour Threshold:</b>	80 - 100 ppm (ethanol), <1 ppm (ethyl acetate)

(Typical values only - consult specification sheet)  
N Av = Not available, N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Chemical stability:** This material is thermally stable when stored and used as directed.

**Conditions to avoid:** Elevated temperatures and sources of ignition.

**Incompatible materials:** Oxidising agents.

**Hazardous decomposition products:** Oxides of carbon and nitrogen, smoke and other toxic fumes.

**Hazardous reactions:** No known hazardous reactions.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

### Acute Effects

**Inhalation:** Material may be an irritant to mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

**Skin contact:** Contact with skin may result in irritation.

# Safety Data Sheet



**Ingestion:** Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

**Eye contact:** An eye irritant.

## Acute toxicity

**Inhalation:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): LC50 > 20.0 mg/L for vapours or LC50 > 5.0 mg/L for dust and mist or LC50 > 20,000 ppm for gas

**Skin contact:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg bw

**Ingestion:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg bw

**Corrosion/Irritancy:** Eye: this material has been classified as a Category 2A Hazard (reversible effects to eyes). Skin: this material has been classified as not corrosive or irritating to skin.

**Sensitisation:** Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

**Aspiration hazard:** This material has been classified as non-hazardous.

**Specific target organ toxicity (single exposure):** This material has been classified as a Category 3 Hazard. Exposure via inhalation may result in depression of the central nervous system.

## Chronic Toxicity

**Mutagenicity:** This material has been classified as non-hazardous.

**Carcinogenicity:** This material has been classified as non-hazardous.

**Reproductive toxicity (including via lactation):** This material has been classified as non-hazardous.

**Specific target organ toxicity (repeat exposure):** This material has been classified as non-hazardous.

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Acute aquatic hazard:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

**Long-term aquatic hazard:** This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log K<sub>ow</sub> < 4.

**Ecotoxicity:** No information available.

**Persistence and degradability:** No information available.

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

# Safety Data Sheet



Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

## 14. TRANSPORT INFORMATION

### ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".



**UN No:** 1993  
**Dangerous Goods Class:** 3  
**Packing Group:** II  
**Hazchem Code:** •3YE  
**Emergency Response Guide No:** 14

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S. (ETHANOL, ETHYL ACETATE)

**Segregation Dangerous Goods:** Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2), toxic substances (Class 6.1), infectious substances (Class 6.2) or radioactive substances (Class 7). Exemptions may apply.

### MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.



**UN No:** 1993  
**Dangerous Goods Class:** 3  
**Packing Group:** II

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S. (ETHANOL, ETHYL ACETATE)

### AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.



**UN No:** 1993  
**Dangerous Goods Class:** 3  
**Packing Group:** II

# Safety Data Sheet



**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S. (ETHANOL, ETHYL ACETATE)

## 15. REGULATORY INFORMATION

**This material is not subject to the following international agreements:**

Montreal Protocol (Ozone depleting substances)  
The Stockholm Convention (Persistent Organic Pollutants)  
The Rotterdam Convention (Prior Informed Consent)  
Basel Convention (Hazardous Waste)  
International Convention for the Prevention of Pollution from Ships (MARPOL)

**This material/constituent(s) is covered by the following requirements:**

- All components of this product are listed on or exempt from the Australian Inventory of Industrial Chemicals (AIIC).

## 16. OTHER INFORMATION

Reason for issue: 5 Yearly Revision

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.