

# SDS ATTACHMENT

PLEASE ATTACH THIS COMPLETED SHEET TO THE SDS FOR:

PRODUCT:

Ballmarker T400 Ink

DATE:

(SDS date)

5-Dec-14

**1. Manufacturer/Supplier:**

Tradegear Ltd  
Level 1, 99 Clarence Street  
Riccarton  
Christchurch 8011  
New Zealand  
Phone: 0800 22 44 34 or +64 3 331 6517  
Fax: 0800 22 11 51 or +64 9 522 8833  
24 hr emergency contact: +64 21 510 624  
Website: [www.tradegear.co.nz](http://www.tradegear.co.nz)  
Email: [office@tradegear.co.nz](mailto:office@tradegear.co.nz)

**Emergency Information:**

National Poison Centre: 0800 764 766  
Chemcall 24/7 Emergency Response Service: 0800 243 622

**13. Disposal Considerations:**

**Product**

Recommendation - Consult local or national regulations to ensure proper disposal.

**Packaging**

Disposal must be made according to official regulations.

**16. Other Information:**

Employers should use this information only as a supplement to other information gathered by them and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.



# Dy-Mark 11010101 Ballmarker Ink T400 All Colours

Dy-Mark

Chemwatch Hazard Alert Code: 3

Chemwatch: 15840

Version No: 6.1.1.1

Material Safety Data Sheet according to NOHSC and ADG requirements

Issue Date: 05/12/2014

Print Date: 20/01/2015

Initial Date: Not Available

S.Local.AUS.EN

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

### Product Identifier

Product name	Dy-Mark 11010101 Ballmarker Ink T400 All Colours
Chemical Name	Not Applicable
Synonyms	11010101 Black, 11010102 Red, 11010103 Blue, 11010104 Green, 11010105 Yellow, 11010106 Orange, 11010111 White, 11012001 Black, 11012002 Red, 11012003 Blue, 11012004 Green, 11012005 Yellow, 11012011 White
Proper shipping name	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Ink.
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### Details of the manufacturer/importer

Registered company name	Dy-Mark
Address	89 Formation Street Wacol 4076 QLD Australia
Telephone	+61 7 3271 2222
Fax	+61 7 3271 2751
Website	Not Available
Email	info@dy-mark.com.au

### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	+61 403 186 708
Other emergency telephone numbers	+61 403 186 708

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

**HAZARDOUS SUBSTANCE. DANGEROUS GOODS.** According to the Criteria of NOHSC, and the ADG Code.

Poisons Schedule	Not Applicable						
Risk Phrases [1]	<table><tr><td>R20/21/22</td><td>Harmful by inhalation, in contact with skin and if swallowed.</td></tr><tr><td>R36/38</td><td>Irritating to eyes and skin.</td></tr><tr><td>R11</td><td>Highly flammable.</td></tr></table>	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.	R36/38	Irritating to eyes and skin.	R11	Highly flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.						
R36/38	Irritating to eyes and skin.						
R11	Highly flammable.						
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI						
GHS Classification [1]	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2						
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI						

### Label elements

GHS label elements	
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SIGNAL WORD **DANGER**

Continued...

**Dy-Mark 11010101 Ballmarker Ink T400 All Colours**

**Hazard statement(s)**

<b>H225</b>	Highly flammable liquid and vapour
<b>H302</b>	Harmful if swallowed
<b>H312</b>	Harmful in contact with skin
<b>H332</b>	Harmful if inhaled
<b>H315</b>	Causes skin irritation
<b>H319</b>	Causes serious eye irritation

**Supplementary statement(s)**

Not Applicable

**CLP classification (additional)**

Not Applicable

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P233</b>	Keep container tightly closed.
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P261</b>	Avoid breathing dust/fume/gas/mist/vapours/spray.

**Precautionary statement(s) Response**

<b>P370+P378_1</b>	In case of fire: Use alcohol resistant foam or normal protein foam for extinction.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P337+P313</b>	If eye irritation persists: Get medical advice/attention.
<b>P301+P312</b>	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/ff you feel unwell.

**Precautionary statement(s) Storage**

<b>P403+P235</b>	Store in a well-ventilated place. Keep cool.
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**Precautionary statement(s) Disposal**

<b>P501</b>	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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**Label elements**



Relevant risk statements are found in section 2

<b>Indication(s) of danger</b>	F, Xi
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**SAFETY ADVICE**

<b>S07</b>	Keep container tightly closed.
<b>S09</b>	Keep container in a well ventilated place.
<b>S13</b>	Keep away from food, drink and animal feeding stuffs.
<b>S16</b>	Keep away from sources of ignition. No smoking.
<b>S23</b>	Do not breathe gas/fumes/vapour/spray.
<b>S25</b>	Avoid contact with eyes.
<b>S26</b>	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
<b>S29</b>	Do not empty into drains.
<b>S33</b>	Take precautionary measures against static discharges.
<b>S36</b>	Wear suitable protective clothing.
<b>S37</b>	Wear suitable gloves.
<b>S39</b>	Wear eye/face protection.
<b>S40</b>	To clean the floor and all objects contaminated by this material, use water.
<b>S41</b>	In case of fire and/or explosion, DO NOT BREATHE FUMES.
<b>S43</b>	In case of fire use...
<b>S46</b>	If swallowed, seek medical advice immediately and show this container or label.
<b>S51</b>	Use only in well ventilated areas.
<b>S56</b>	Dispose of this material and its container at hazardous or special waste collection point.
<b>S64</b>	If swallowed, rinse mouth with water (only if the person is conscious).

**Other hazards**

	Cumulative effects may result following exposure*.
	May produce discomfort of the respiratory system*.

	Vapours potentially cause drowsiness and dizziness*.
	Limited evidence of a carcinogenic effect*.
	May be harmful to the foetus/ embryo*.
	May possibly affect fertility*.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
64-17-5	30-70	<a href="#">ethanol</a>
111-76-2	10-30	<a href="#">ethylene glycol monobutyl ether</a>
Not Available	<30	pigment (lead-free)
Not Available	<15	resin
		NOTE: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.

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### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>
<b>Ingestion</b>	<p>If poisoning occurs, contact a doctor or Poisons Information Centre.</p> <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

#### Indication of any immediate medical attention and special treatment needed

Followed acute or short term repeated exposures to ethylene glycol monoalkyl ethers and their acetates:

- ▶ Hepatic metabolism produces ethylene glycol as a metabolite.
- ▶ Clinical presentation, following severe intoxication, resembles that of ethylene glycol exposures.
- ▶ Monitoring the urinary excretion of the alkoxyacetic acid metabolites may be a useful indication of exposure.

[Ellenhorn and Barceloux: Medical Toxicology]

For acute or short term repeated exposures to ethylene glycol:

- ▶ Early treatment of ingestion is important. Ensure emesis is satisfactory.
- ▶ Test and correct for metabolic acidosis and hypocalcaemia.
- ▶ Apply sustained diuresis when possible with hypertonic mannitol.
- ▶ Evaluate renal status and begin haemodialysis if indicated. [I.L.O]
- ▶ Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- ▶ Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- ▶ Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- ▶ Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- ▶ Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.

[Ellenhorn and Barceloux: Medical Toxicology]

It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures.

Laitinen J., et al: *Occupational & Environmental Medicine* 1996; 53, 595-600

### SECTION 5 FIREFIGHTING MEASURES

#### Extinguishing media

	<ul style="list-style-type: none"> <li>▶ Foam.</li> <li>▶ Dry chemical powder.</li> </ul>
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Continued...

## Dy-Mark 11010101 Ballmarker Ink T400 All Colours

- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

**Fire Incompatibility** | Avoid contamination with strong oxidising agents as ignition may result

### Advice for firefighters

**Fire Fighting**

- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ May be violently or explosively reactive.
- ▶ Wear breathing apparatus plus protective gloves in the event of a fire.
- ▶ Prevent, by any means available, spillage from entering drains or water course.

**Fire/Explosion Hazard**

- ▶ Liquid and vapour are highly flammable.
- ▶ Severe fire hazard when exposed to heat, flame and/or oxidisers.
- ▶ Vapour forms an explosive mixture with air.
- ▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Minor Spills**

- ▶ Remove all ignition sources.
- ▶ Clean up all spills immediately.
- ▶ Avoid breathing vapours and contact with skin and eyes.
- ▶ Control personal contact with the substance, by using protective equipment.

**Major Spills**

- ▶ Clear area of personnel and move upwind.
- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ May be violently or explosively reactive.
- ▶ Wear breathing apparatus plus protective gloves.

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

**Safe handling**

- ▶ Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area.
- ▶ Prevent concentration in hollows and sumps.

**Other information**

- ▶ Store in original containers in approved flame-proof area.
- ▶ No smoking, naked lights, heat or ignition sources.
- ▶ **DO NOT store in pits, depressions, basements or areas where vapours may be trapped.**
- ▶ Keep containers securely sealed.

### Conditions for safe storage, including any incompatibilities

**Suitable container**

- ▶ Packing as supplied by manufacturer.
- ▶ Plastic containers may only be used if approved for flammable liquid.
- ▶ Check that containers are clearly labelled and free from leaks.

**Storage incompatibility**

Avoid storage with oxidising agents, acids and alkalis.



- X — Must not be stored together
- O — May be stored together with specific preventions
- + — May be stored together

### PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	ethanol	Ethyl alcohol	1880 mg/m3 / 1000 ppm	Not Available	Not Available	Not Available
Australia Exposure Standards	ethylene glycol monobutyl ether	2-Butoxyethanol	96.9 mg/m3 / 20 ppm	242 mg/m3 / 50 ppm	Not Available	Sk


#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ethanol	Ethyl alcohol; (Ethanol)	Not Available	Not Available	Not Available

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ethylene glycol monobutyl ether	Butoxyethanol, 2-; (Glycol ether EB)	20 ppm	20 ppm	700 ppm
Ingredient	Original IDLH	Revised IDLH		
ethanol	15,000 ppm	3,300 [LEL] ppm		
ethylene glycol monobutyl ether	700 ppm	700 [Unch] ppm		
pigment (lead-free)	Not Available	Not Available		
resin	Not Available	Not Available		

## Exposure controls

<b>Appropriate engineering controls</b>	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
<b>Personal protection</b>	
<b>Eye and face protection</b>	No special equipment for minor exposure i.e. when handling small quantities. OTHERWISE: <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Neoprene gloves</li> <li>▶ PVC gloves</li> <li>▶ Rubber boots</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	No special equipment needed when handling small quantities. OTHERWISE: <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ Barrier cream.</li> <li>▶ Eyewash unit.</li> </ul>
<b>Thermal hazards</b>	Not Available

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Material	CPI
BUTYL	A
PE/EVAL/PE	A
NEOPRENE	B
NITRILE	B
PVC	B
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NITRILE+PVC	C
PVA	C
SARANEX-23	C
##ethylene glycol monobutyl	ether

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

## Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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	-	A-PAPR-AUS / Class 1
up to 25 x ES	Air-line*	A-2	A-PAPR-2
up to 50 x ES	-	A-3	-
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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

## Dy-Mark 11010101 Ballmarker Ink T400 All Colours

<b>Appearance</b>	Coloured high viscosity ink with sweet solvent odour; mixes with water.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.85-1.00
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not available.
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Applicable	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	80	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	13	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	HIGHLY FLAMMABLE.	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not available.
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Miscible	<b>pH as a solution(1%)</b>	Not available.
<b>Vapour density (Air = 1)</b>	Not available.	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

<b>Inhaled</b>	<p>The vapour is discomforting to the upper respiratory tract Inhalation hazard is increased at higher temperatures. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p> <p>with dizziness, disorientation, mental confusion, slurred speech If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death. Not considered an irritant through normal use. ISymptoms may be same as intoxication, drunkenness</p>
<b>Ingestion</b>	<p>Considered an unlikely route of entry in commercial/industrial environments The liquid is discomforting to the gastro-intestinal tract and may cause dizziness, disorientation, mental confusion, slurred speech Ingestion may result in nausea, abdominal irritation, pain and vomiting ISevere acute exposure by ingestion may cause kidney damage, haemoglobinuria,(blood in urine).</p>
<b>Skin Contact</b>	<p>The liquid is discomforting to the skin and may cause drying of the skin, which may lead to dermatitis Toxic effects may result from skin absorption Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing skin condition The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p>
<b>Eye</b>	<p>The liquid may produce eye discomfort causing smarting, pain and redness. The vapour is discomforting to the eyes The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p>
<b>Chronic</b>	<p>Principal routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures. Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following. IChronic exposure may cause anaemia, macrocytosis, abnormally large redcells and abnormal red cell fragility.</p>

<b>Dy-Mark 11010101 Ballmarker Ink T400 All Colours</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available

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	TOXICITY	IRRITATION
	<b>ethanol</b>	Inhalation (rat) LC50: 20,000 ppm/10h
Inhalation (rat) LC50: 64000 ppm/4h		Eye (rabbit):100mg/24hr-moderate
Oral (rat) LD50: 7060 mg/kg		Skin (rabbit):20 mg/24hr-moderate Skin (rabbit):400 mg (open)-mild
Not Available		Not Available
	TOXICITY	IRRITATION
	<b>ethylene glycol monobutyl ether</b>	Dermal (Guinea pig) LD50: 210 mg/kg **
Dermal (rabbit) LD50: 220 mg/kg		Eye (rabbit): 100 mg SEVERE
Inhalation (Rat) LC50: 2210 mg/m3 **		Eye (rabbit): 100 mg/24h-moderate
Inhalation (Rat) LC50: 450 ppm *		Skin (rabbit): 500 mg, open; mild
Oral (Rat) LD50: 300 mg/kg **		
Oral (rat) LD50: 470 mg/kg		
Not Available		Not Available

Not available. Refer to individual constituents.

<b>ETHANOL</b>	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
<b>ETHYLENE GLYCOL MONOBUTYL ETHER</b>	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. For ethylene glycol monoalkyl ethers and their acetates (EGMAEs): Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates. NOTE: Changes in kidney, liver, spleen and lungs are observed in animals exposed to high concentrations of this substance by all routes. ** ASCC (NZ) SDS

<b>Acute Toxicity</b>	✓	<b>Carcinogenicity</b>	⊘
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	⊘
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	⊘
<b>Respiratory or Skin sensitisation</b>	⊘	<b>STOT - Repeated Exposure</b>	⊘
<b>Mutagenicity</b>	⊘	<b>Aspiration Hazard</b>	⊘

Legend: ✓ – Data required to make classification available  
✗ – Data available but does not fill the criteria for classification  
⊘ – Data Not Available to make classification

CMR STATUS

<b>SKIN</b>	ethylene glycol monobutyl ether	Australia Exposure Standards - Skin	Sk
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SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
ethylene glycol monobutyl ether	LOW (Half-life = 56 days)	LOW (Half-life = 1.37 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
ethanol	LOW (LogKOW = -0.31)
ethylene glycol monobutyl ether	LOW (BCF = 2.51)

Mobility in soil

Ingredient	Mobility
ethanol	HIGH (KOC = 1)
ethylene glycol monobutyl ether	HIGH (KOC = 1)



Dy-Mark 11010101 Ballmarker Ink T400 All Colours

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Consult manufacturer for recycling options and recycle where possible .</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <li>▶ Incinerate residue at an approved site.</li> <li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul>
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**SECTION 14 TRANSPORT INFORMATION**

**Labels Required**

	
<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	3YE

**Land transport (ADG)**

<b>UN number</b>	1210				
<b>Packing group</b>	II				
<b>UN proper shipping name</b>	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable				
<b>Environmental hazard</b>	No relevant data				
<b>Transport hazard class(es)</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Class</td> <td style="border-left: 1px dashed black;">3</td> </tr> <tr> <td>Subrisk</td> <td style="border-left: 1px dashed black;">Not Applicable</td> </tr> </table>	Class	3	Subrisk	Not Applicable
Class	3				
Subrisk	Not Applicable				
<b>Special precautions for user</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Special provisions</td> <td style="border-left: 1px dashed black;">163 *</td> </tr> <tr> <td>Limited quantity</td> <td style="border-left: 1px dashed black;">5 L</td> </tr> </table>	Special provisions	163 *	Limited quantity	5 L
Special provisions	163 *				
Limited quantity	5 L				

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	1210														
<b>Packing group</b>	II														
<b>UN proper shipping name</b>	Printing ink flammable; Printing ink related material (including printing ink thinning or reducing compound), flammable														
<b>Environmental hazard</b>	No relevant data														
<b>Transport hazard class(es)</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">ICAO/IATA Class</td> <td style="border-left: 1px dashed black;">3</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td style="border-left: 1px dashed black;">Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td style="border-left: 1px dashed black;">3L</td> </tr> </table>	ICAO/IATA Class	3	ICAO / IATA Subrisk	Not Applicable	ERG Code	3L								
ICAO/IATA Class	3														
ICAO / IATA Subrisk	Not Applicable														
ERG Code	3L														
<b>Special precautions for user</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Special provisions</td> <td style="border-left: 1px dashed black;">A3 A72 A192</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td style="border-left: 1px dashed black;">364</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td style="border-left: 1px dashed black;">60 L</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td style="border-left: 1px dashed black;">353</td> </tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td> <td style="border-left: 1px dashed black;">5 L</td> </tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td> <td style="border-left: 1px dashed black;">Y341</td> </tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td> <td style="border-left: 1px dashed black;">1 L</td> </tr> </table>	Special provisions	A3 A72 A192	Cargo Only Packing Instructions	364	Cargo Only Maximum Qty / Pack	60 L	Passenger and Cargo Packing Instructions	353	Passenger and Cargo Maximum Qty / Pack	5 L	Passenger and Cargo Limited Quantity Packing Instructions	Y341	Passenger and Cargo Limited Maximum Qty / Pack	1 L
Special provisions	A3 A72 A192														
Cargo Only Packing Instructions	364														
Cargo Only Maximum Qty / Pack	60 L														
Passenger and Cargo Packing Instructions	353														
Passenger and Cargo Maximum Qty / Pack	5 L														
Passenger and Cargo Limited Quantity Packing Instructions	Y341														
Passenger and Cargo Limited Maximum Qty / Pack	1 L														

**Sea transport (IMDG-Code / GGVSee)**

<b>UN number</b>	1210						
<b>Packing group</b>	II						
<b>UN proper shipping name</b>	PRINTING INK flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable						
<b>Environmental hazard</b>	No relevant data						
<b>Transport hazard class(es)</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">IMDG Class</td> <td style="border-left: 1px dashed black;">3</td> </tr> <tr> <td>IMDG Subrisk</td> <td style="border-left: 1px dashed black;">Not Applicable</td> </tr> </table>	IMDG Class	3	IMDG Subrisk	Not Applicable		
IMDG Class	3						
IMDG Subrisk	Not Applicable						
<b>Special precautions for user</b>	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">EMS Number</td> <td style="border-left: 1px dashed black;">F-E , S-D</td> </tr> <tr> <td>Special provisions</td> <td style="border-left: 1px dashed black;">163</td> </tr> <tr> <td>Limited Quantities</td> <td style="border-left: 1px dashed black;">5 L</td> </tr> </table>	EMS Number	F-E , S-D	Special provisions	163	Limited Quantities	5 L
EMS Number	F-E , S-D						
Special provisions	163						
Limited Quantities	5 L						

**SECTION 15 REGULATORY INFORMATION**

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

Continued...

**Dy-Mark 11010101 Ballmarker Ink T400 All Colours**

<b>ethanol(64-17-5) is found on the following regulatory lists</b>	"Australia Exposure Standards","Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists"
<b>ethylene glycol monobutyl ether(111-76-2) is found on the following regulatory lists</b>	"Australia Exposure Standards","International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs","Australia Inventory of Chemical Substances (AICS)","Australia Hazardous Substances Information System - Consolidated Lists"

**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.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references)

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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