

# Datamark Ink DOD 800 NP Grey

## Datamark Identification

Chemwatch: 4901-56  
 Version No: 5.1.1.1  
 Material Safety Data Sheet according to NOHSC and ADG requirements

Chemwatch Hazard Alert Code: 3

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 Initial Date: **Not Available**  
 S.Local.AUS.EN

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

### Product Identifier

Product name	Datamark Ink DOD 800 NP Grey
Chemical Name	Not Applicable
Synonyms	DOD800 800NP
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	Printing ink.
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### Details of the manufacturer/importer

Registered company name	Datamark Identification
Address	19 Lang Parade QLD 4064 Milton Australia
Telephone	1300 657 633
Fax	+61 7 3271 2751
Website	Not Available
Email	Not Available

### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	0414 373 494
Other emergency telephone numbers	0414 373 494

## 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 <sup>[1]</sup>	<b>R66</b> Repeated exposure may cause skin dryness and cracking.
	<b>R11</b> Highly flammable.
	<b>R67</b> Vapours may cause drowsiness and dizziness.
	<b>R41</b> Risk of serious damage to eyes.
	<b>R22</b> Harmful if swallowed.
	<b>R65</b> HARMFUL-May cause lung damage if swallowed.
	<b>R40(3)</b> Limited evidence of a carcinogenic effect.
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
GHS Classification <sup>[1]</sup>	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 4, Serious Eye Damage Category 1, Carcinogen Category 2, STOT - SE (Narcosis) Category 3, Aspiration Hazard Category 1
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

### Label elements

**Datamark Ink DOD 800 NP Grey**

GHS label elements	
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SIGNAL WORD	<b>DANGER</b>
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**Hazard statement(s)**

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H318	Causes serious eye damage
H351	Suspected of causing cancer
H336	May cause drowsiness or dizziness
H304	May be fatal if swallowed and enters airways
AUH066	Repeated exposure may cause skin dryness and cracking

**Supplementary statement(s)**

Not Applicable

**CLP classification (additional)**

Not Applicable

**Precautionary statement(s): Prevention**

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement(s): Response**

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P331	Do NOT induce vomiting.

**Precautionary statement(s): Storage**

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

**Precautionary statement(s): Disposal**

P501	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

Indication(s) of danger	F, Xn
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**SAFETY ADVICE**

S09	Keep container in a well ventilated place.
S13	Keep away from food, drink and animal feeding stuffs.
S16	Keep away from sources of ignition. No smoking.
S23	Do not breathe gas/fumes/vapour/spray.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S36	Wear suitable protective clothing.

S37	Wear suitable gloves.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water.
S41	In case of fire and/or explosion, DO NOT BREATHE FUMES.
S43	In case of fire use...
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well ventilated areas.
S53	Avoid exposure - obtain special instructions before use.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

#### Other hazards

	Inhalation and/or skin contact may produce health damage*.
	May produce discomfort of the respiratory system and skin*.
	Cumulative effects may result following exposure*.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
64-17-5	10-30	<a href="#">ethanol</a>
71-23-8	10-30	<a href="#">n-propanol</a>
109-60-4	10-30	<a href="#">n-propyl acetate</a>
Not Available	1-10	polyamide resin
	NotSpec.	NOTE: Manufacturer has supplied full ingredient
	NotSpec.	information to allow CHEMWATCH assessment.

NOTE: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.

### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

Eye Contact	<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>
Skin Contact	<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>
Inhalation	<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>
Ingestion	<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> <li>▶ Avoid giving milk or oils.</li> <li>▶ Avoid giving alcohol.</li> </ul>

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

	Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse
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effects of aspiration into the lungs may be delayed up to 48 hours.

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

#### BASIC TREATMENT

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

#### ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

Treat symptomatically.

for simple esters:

#### BASIC TREATMENT

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

#### ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
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- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

#### EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For acute or short term repeated exposures to ethanol:

- ▶ Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- ▶ Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- ▶ Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- ▶ Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- ▶ Fructose administration is contra-indicated due to side effects.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

**Fire Incompatibility**

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

**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 may travel a considerable distance to source of ignition.
- ▶ Heating may cause expansion or decomposition leading to violent rupture of containers.

**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**

- ▶ Containers, even those that have been emptied, may contain explosive vapours.
- ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- ▶ **DO NOT allow clothing wet with material to stay in contact with skin**
- ▶ Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of exposure occurs.

**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.
- ▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type.

**Storage incompatibility**

- ▶ Avoid reaction with oxidising agents



**X** — Must not be stored together

**0** — 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/m <sup>3</sup> / 1000 ppm	Not Available	Not Available	Not Available
Australia Exposure Standards	n-propanol	Propyl alcohol	492 mg/m <sup>3</sup> / 200 ppm	614 mg/m <sup>3</sup> / 250 ppm	Not Available	Sk
Australia Exposure Standards	n-propyl acetate	n-Propyl acetate	835 mg/m <sup>3</sup> / 200 ppm	1040 mg/m <sup>3</sup> / 250 ppm	Not Available	Not Available

**EMERGENCY LIMITS**

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
ethanol	1000 ppm	3000 ppm	3300 ppm	3300 ppm
n-propanol	200 ppm	250 ppm	250 ppm	800 ppm
n-propyl acetate	200 ppm	250 ppm	1000 ppm	1700 ppm

Ingredient	Original IDLH	Revised IDLH
ethanol	15,000 ppm	3,300 [LEL] ppm
n-propanol	4,000 ppm	800 ppm
n-propyl acetate	8,000 ppm	1,700 ppm
polyamide 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>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</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>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> For esters: <ul style="list-style-type: none"> <li>▶ Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials.</li> </ul> The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</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:

Datamark Ink DOD 800 NP Grey

Material	CPI
##n-propyl	acetate
NEOPRENE	B
NITRILE	B

\* 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 10 x ES	Air-line*	A-2	A-PAPR-2 ^
up to 20 x ES	-	A-3	-
20+ x ES	-	Air-line**	-

\* - Continuous-flow; \*\* - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB =

Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Grey highly flammable liquid; miscible with water.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	Not Available
<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 Applicable	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	Not Available	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	<23	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	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>	>60
<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 Applicable
<b>Vapour density (Air = 1)</b>	>1	<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>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation.</p>
<b>Ingestion</b>	<p>Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.</p> <p>Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).</p> <p>Effects on the nervous system characterise over-exposure to higher aliphatic alcohols.</p>
<b>Skin Contact</b>	<p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>The material may produce moderate skin irritation; limited evidence or practical experience suggests, that the material either:</p> <ul style="list-style-type: none"> <li>▶ produces moderate inflammation of the skin in a substantial number of individuals following direct contact and/or</li> <li>▶ produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.</li> </ul> <p>Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic).</p>
<b>Eye</b>	<p>When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.</p> <p>Direct contact of the eye with ethanol may cause immediate stinging and burning with reflex closure of the lid and tearing, transient injury of the corneal epithelium and hyperaemia of the conjunctiva. Foreign-body type discomfort may persist for up to 2 days but healing is usually spontaneous and complete.</p>
<b>Chronic</b>	<p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p>

When administered to rats by intubation (0.3 ml/kg twice each week for a total dosage of 50 ml) n-propanol produced severe liver injury and hyperplasia, malignant tumours (myeloid leukaemia, liver sarcomas, liver cell carcinoma) and benign tumours.

Datamark Ink DOD 800 NP Grey	TOXICITY	IRRITATION
	Not Available	Not Available
ethanol	TOXICITY	IRRITATION
	Inhalation (rat) LC50: 20,000 ppm/10h	Eye (rabbit): 500 mg SEVERE
	Inhalation (rat) LC50: 64000 ppm/4h	Eye (rabbit): 100mg/24hr-moderate
	Oral (rat) LD50: 7060 mg/kg	Skin (rabbit): 20 mg/24hr-moderate
	Not Available	Skin (rabbit): 400 mg (open)-mild
n-propanol	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 5040 mg/kg	Eye (rabbit): 20 mg/24h moderate
	Oral (rat) LD50: 1870 mg/kg	Eye (rabbit): 4 mg open SEVERE
	Not Available	Skin (rabbit): 20 mg/24h moderate
	Not Available	Skin (rabbit): 500 mg open mild
n-propyl acetate	TOXICITY	IRRITATION
	Intraperitoneal (Mouse) LD50: 1420 mg/kg	Eye (rabbit): 500 mg/24h - mild
	Oral (Mouse) LD50: 8300 mg/kg	Skin (rabbit): 500 mg (open)- mild
	Oral (Rabbit) LD50: 6640 mg/kg	
	Oral (rat) LD50: 9370 mg/kg	
Not Available	Not Available	

\* Value obtained from manufacturer's msds  
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

Datamark Ink DOD 800 NP Grey	No significant acute toxicological data identified in literature search. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.
ETHANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.
N-PROPANOL	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 a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.
N-PROPYL ACETATE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

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

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

SKIN	n-propanol	Australia Exposure Standards - Skin	SK
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## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

For n-propanol:

log Kow : 0.25-0.34

Half-life (hr) air : 6.7

Half-life (hr) H<sub>2</sub>O surface water : 6.5

Henry's atm m<sup>3</sup>/mol: 6.85E-06

BOD 5: 1.43-1.6 g O<sub>2</sub>/g

BOD 20: <2 g O<sub>2</sub>/g

COD : 91%

ThOD : 1.8 g O<sub>2</sub>/g

BCF : 0.7

Ecological information:

High biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism.

n-Propanol is expected to biodegrade and is not expected to persist for long periods in aquatic environments. When diluted with a large amount of water, n-propanol is not expected to have a significant impact

When ethanol is released into the soil it readily and quickly biodegrades but may leach into ground water; most is lost by evaporation. When released into water the material readily evaporates and is biodegradable.

### Persistence and degradability

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

### Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

### Mobility in soil

Ingredient	Mobility
Not Available	Not Available


## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and MSDS and observe all notices pertaining to the product.</li> </ul>
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## SECTION 14 TRANSPORT INFORMATION

### Labels Required

	
Marine Pollutant	NO
HAZCHEM	*3YE

### Land transport (ADG)

UN number	1210
Packing group	II
UN proper shipping name	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable
Environmental hazard	No relevant data
Transport hazard class(es)	Class : 3 Subrisk : Not Applicable
Special precautions for user	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>	ICAO/IATA Class	3
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	3L
<b>Special precautions for user</b>	Special provisions	A3A72
	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>	IMDG Class	3
	IMDG Subrisk	Not Applicable
<b>Special precautions for user</b>	EMS Number	F-E , S-D
	Special provisions	163
	Limited Quantities	5 L

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

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	n-propanol	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	n-propyl acetate	Y

**SECTION 15 REGULATORY INFORMATION****Safety, health and environmental regulations / legislation specific for the substance or mixture**

<b>ethanol(64-17-5) is found on the following regulatory lists</b>	"IOFI Global Reference List of Chemically Defined Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Maritime Dangerous Goods Requirements (IMDG Code)", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (French)", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports (Korean)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Exposure Standards", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "Australia FAISD Handbook - First Aid Instructions, Warning Statements, and General Safety Precautions", "FisherTransport Information", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Joint FAO/WHO Expert Committee on Food Additives (JECFA) - Specifications for Flavourings", "OSPAR National List of Candidates for Substitution - Norway", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix B (Part 3)", "WHO Model List of Essential Medicines - Adults", "Australia Inventory of Chemical Substances (AICS)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "UNECE - Kiev Protocol on Pollutant Release and Transfer Registers - Annex II", "World Anti-Doping Agency - The 2014 Prohibited List World Anti-Doping Code - Substances Prohibited in Particular Sports", "Australia National Pollutant Inventory", "World Anti-Doping Agency - The 2009 Prohibited List World Anti-Doping Code - Substances Prohibited in Competition (German)", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "Australia High Volume Industrial Chemical List (HVICL)", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "FEMA Generally Recognized as Safe (GRAS) Flavoring Substances 23 - Examples of FEMA GRAS Substances with Non-Flavor Functions", "International Air Transport Association (IATA) Dangerous Goods Regulations", "Australia Hazardous Substances Information System - Consolidated Lists", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "Acros Transport Information"
<b>n-propanol(71-23-8) is found on the following regulatory lists</b>	"IOFI Global Reference List of Chemically Defined Substances", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Exposure Standards", "FisherTransport Information", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of

	<p>components already assessed by IMO", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Joint FAO/WHO Expert Committee on Food Additives (JECFA) - Specifications for Flavoursings", "OSPAR National List of Candidates for Substitution – Norway", "Australia Inventory of Chemical Substances (AICS)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "Australia National Pollutant Inventory", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "Australia High Volume Industrial Chemical List (HVICL)", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "International Air Transport Association (IATA) Dangerous Goods Regulations", "Australia Hazardous Substances Information System - Consolidated Lists", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements"</p>
<p><b>n-propyl acetate(109-60-4) is found on the following regulatory lists</b></p>	<p>"International Council of Chemical Associations (ICCA) - High Production Volume List", "IOFI Global Reference List of Chemically Defined Substances", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Exposure Standards", "FisherTransport Information", "Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Joint FAO/WHO Expert Committee on Food Additives (JECFA) - Specifications for Flavoursings", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix B (Part 3)", "OSPAR National List of Candidates for Substitution – Norway", "Australia Inventory of Chemical Substances (AICS)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "Australia National Pollutant Inventory", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "Australia High Volume Industrial Chemical List (HVICL)", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "International Air Transport Association (IATA) Dangerous Goods Regulations", "Australia Hazardous Substances Information System - Consolidated Lists", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "Acros Transport Information"</p>

## 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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