Datamark INK DOD 800 NP COLOURS

Datamark Identification

Chemwatch Hazard Alert Code: 3

Chemwatch: **03-0802**
Version No: **3.1.1.1**
Material Safety Data Sheet according to NOHSC and ADG requirements

Issue Date: **04/04/2014**
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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 COLOURS
Chemical Name	Not Applicable
Synonyms	INK DOD 800 NP GREY, INK DOD 800 NP WHITE, INK DOD 800 NP YELLOW
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	Use according to manufacturer's directions.

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 [1]	**R11**	Highly flammable.
	R36	Irritating to eyes.
	R67	Vapours may cause drowsiness and dizziness.
	R66	Repeated exposure may cause skin dryness and cracking.
	R65	HARMFUL-May cause lung damage if swallowed.
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, Eye Irrit. 2, STOT - SE (Narcosis) Category 3, Aspiration Hazard Category 1	
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	

Continued...

SIGNAL WORD	DANGER

Hazard statement(s)

H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
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

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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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
P331	Do NOT induce vomiting.
P370+P378	In case of fire: Use… to extinguish.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Label elements

Relevant risk statements are found in section 2

Indication(s) of danger	F, Xn

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 and detergent.
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.

Continued...

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 ingestion 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	20-35	ethanol
109-60-4	20-30	n-propyl acetate
141-78-6	15-20	ethyl acetate
9004-57-3	5-10	ethylcellulose
1569-02-4	5-10	propylene glycol monoethyl ether, alpha isomer

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ 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. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ 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. ▸ Transport to hospital, or doctor.
Ingestion	▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▸ Seek medical advice.

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 effects of aspiration into the lungs may be delayed up to 48 hours.
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.

Continued...

	▸ 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. ---------- 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.

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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	▸ Esters react with acids to liberate heat along with alcohols and acids. ▸ Strong oxidising acids may cause a vigorous reaction with esters that is sufficiently exothermic to ignite the reaction products. ▸ Heat is also generated by the interaction of esters with caustic solutions. ▸ Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.

\+ X X X X +

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/m3 / 1000 ppm	Not Available	Not Available	Not Available
Australia Exposure Standards	n-propyl acetate	n-Propyl acetate	835 mg/m3 / 200 ppm	1040 mg/m3 / 250 ppm	Not Available	Not Available
Australia Exposure Standards	ethyl acetate	Ethyl acetate	720 mg/m3 / 200 ppm	1440 mg/m3 / 400 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-propyl acetate	200 ppm	250 ppm	1000 ppm	1700 ppm
ethyl acetate	400 ppm	400 ppm	400 ppm	2000 ppm
ethylcellulose	20 ppm	60 ppm	400 ppm	500 ppm

Ingredient	Original IDLH	Revised IDLH
ethanol	15,000 ppm	3,300 [LEL] ppm
n-propyl acetate	8,000 ppm	1,700 ppm
ethyl acetate	10,000 ppm	2,000 [LEL] ppm
ethylcellulose	Not Available	Not Available
propylene glycol monoethyl ether, alpha isomer	Not Available	Not Available

Exposure controls

Appropriate engineering controls	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.
Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ 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.
Skin protection	See Hand protection below

Continued...

Hands/feet protection	▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber 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. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and.has to be observed when making a final choice.
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ PVC Apron. ▸ PVC protective suit may be required if exposure severe. ▸ Eyewash unit.
Thermal hazards	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 COLOURS

Material	CPI
##ethyl	acetate
##n-propyl	acetate
PE/EVAL/PE	A
BUTYL	B
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-P 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 P2	A-PAPR-2 P2 ^
up to 20 x ES	-	A-3 P2	-
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

Appearance	Coloured flammable liquid; partially miscible with water.

Physical state	Liquid	**Relative density (Water = 1)**	0.8-0.9
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	5 approx.	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Flammable.	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Partly Miscible	**pH as a solution(1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Continued...

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. 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. Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation.
Ingestion	Considered an unlikely route of entry in commercial/industrial environments 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. Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis). Accidental ingestion of the material may be damaging to the health of the individual.
Skin Contact	Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. The material may produce moderate skin irritation; limited evidence or practical experience suggests, that the material either: ▸ produces moderate inflammation of the skin in a substantial number of individuals following direct contact and/or ▸ 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. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis.
Eye	Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate. Repeated or prolonged exposure to irritants may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Datamark INK DOD 800 NP COLOURS	**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
		Skin (rabbit):400 mg (open)-mild
	Not Available	Not Available
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
ethyl acetate	**TOXICITY**	**IRRITATION**
	Inhalation (rat) LC50: 1600 ppm/8h	Eye (human): 400 ppm
	Intraperitoneal (Mouse) LD50: 709 mg/kg	
	Oral (Guinea pig) LD50: 5500 mg/kg	
	Oral (Mouse) LD50: 4100 mg/kg	
	Oral (Rabbit) LD50: 4935 mg/kg	
	Oral (rat) LD50: 5620 mg/kg	
	Not Available	Not Available

Continued...

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

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.
Datamark INK DOD 800 NP COLOURS, 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.
ETHYLCELLULOSE, PROPYLENE GLYCOL MONOETHYL ETHER, ALPHA ISOMER	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

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

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

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	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: ▸ Reduction ▸ Reuse ▸ Recycling ▸ Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Continued...

	
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)

UN number	1210
Packing group	II
UN proper shipping name	Printing ink flammable; Printing ink related material (including printing ink thinning or reducing compound), flammable
Environmental hazard	No relevant data
Transport hazard class(es)	ICAO/IATA Class: 3 ICAO / IATA Subrisk: Not Applicable ERG Code: 3L
Special precautions for user	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)

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)	IMDG Class: 3 IMDG Subrisk: Not Applicable
Special precautions for user	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-propyl acetate	Y
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	ethyl acetate	Z

SECTION 15 REGULATORY INFORMATION

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

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ethanol(64-17-5) is found on the following regulatory lists	"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"
n-propyl acetate(109-60-4) is found on the following regulatory lists	"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 Flavourings","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"
ethyl acetate(141-78-6) is found on the following regulatory lists	"International Council of Chemical Associations (ICCA) - High Production Volume List","IOFI Global Reference List of Chemically Defined Substances","International Maritime Dangerous Goods Requirements (IMDG Code)","WHO Food Additives Series - Flavouring agents considered for specifications only","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","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 Flavourings","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"
ethylcellulose(9004-57-3) is found on the following regulatory lists	"United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II","FisherTransport Information","Australia Inventory of Chemical Substances (AICS)","International Numbering System for Food Additives","Sigma-AldrichTransport Information","CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP","International Fragrance Association (IFRA) Survey: Transparency List","United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control (Red List) - Table II"
propylene glycol monoethyl ether, alpha isomer(1569-02-4) is found on the following regulatory lists	"Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2","International Maritime Dangerous Goods Requirements (IMDG Code)","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","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","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","United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)","Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List","International Air Transport Association (IATA) Dangerous Goods Regulations","Australia Hazardous Substances Information System - Consolidated Lists","IMO IBC Code Chapter 17: Summary of minimum requirements"

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

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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