



Dy-Mark iFine Ink Marker All Colours

Dy-Mark

Chemwatch: 4784-04
Version No: 6.1.1.1
Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 1

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S.GHS.AUS.EN

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

Product Identifier

| | |
|-------------------------------|---|
| Product name | Dy-Mark iFine Ink Marker All Colours |
| Synonyms | 12151001 Black, 12151002 Red, 12151003 Blue |
| Other means of identification | Not Available |

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

| | |
|--------------------------|---|
| Relevant identified uses | Use according to manufacturer's directions. |
|--------------------------|---|

Details of the supplier of the safety data sheet

| | |
|-------------------------|---|
| Registered company name | Dy-Mark |
| Address | 89 Formation Street Wacol QLD 4076 Australia |
| Telephone | +61 7 3327 3004 |
| Fax | +61 7 3327 3009 |
| Website | https://www.dymark.com.au |
| Email | info@dymark.com.au |

Emergency telephone number

| | |
|-----------------------------------|-----------------|
| Association / Organisation | Not Available |
| Emergency telephone numbers | +61 7 3327 3099 |
| Other emergency telephone numbers | Not Available |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

| | Min | Max |
|--------------|-----|-----|
| Flammability | 1 | |
| Toxicity | 1 | |
| Body Contact | 1 | |
| Reactivity | 1 | |
| Chronic | 0 | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|------------------|----------------|
| Poisons Schedule | Not Applicable |
| Classification | Not Applicable |

Label elements

| | |
|---------------------|-----------------------|
| Hazard pictogram(s) | Not Applicable |
| SIGNAL WORD | NOT APPLICABLE |

Hazard statement(s)

Not Applicable

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Continued...

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Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|---------------|-----------|---|
| 9003-07-0 | 60 | <u>polypropylene fibre</u> |
| Not Available | 10 | polyester |
| 107-98-2 | 10 | <u>propylene glycol monomethyl ether - mixture of isomers</u> |
| 9002-88-4 | 8.5 | <u>polyethylene</u> |
| 64-17-5 | 5 | <u>ethanol</u> |
| Not Available | 2-3 | resin |
| 71-36-3 | 2 | <u>n-butanol</u> |
| Not Available | 0.5-2.5 | solvent dyes |
| Not Available | 1.5 | acrylic |
| Not Available | 0.1 | cap-off additives |

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"> ▶ 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 | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ 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 | <ul style="list-style-type: none"> ▶ 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 | <ul style="list-style-type: none"> ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

- ▶ Water spray or fog.
- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ 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 | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water courses. ▶ Use water delivered as a fine spray to control fire and cool adjacent area. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions. ▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions). ▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once |

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| | |
|----------------|--|
| | <ul style="list-style-type: none"> ▶ initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion. Combustion products include: <ul style="list-style-type: none"> · carbon dioxide (CO₂) · other pyrolysis products typical of burning organic material. May emit poisonous fumes. |
| HAZCHEM | Not Applicable |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|---|
| Minor Spills | <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment. |
| Major Spills | Moderate hazard. <ul style="list-style-type: none"> ▶ CAUTION: Advise personnel in area. ▶ Alert Emergency Services and tell them location and nature of hazard. ▶ Control personal contact by wearing protective clothing. |

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

| | |
|--------------------------|--|
| Safe handling | <ul style="list-style-type: none"> ▶ 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. ▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions) ▶ Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. ▶ Establish good housekeeping practices. ▶ Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds. |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry area protected from environmental extremes. ▶ Store away from incompatible materials and foodstuff containers. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ Polyethylene or polypropylene container. ▶ Check all containers are clearly labelled and free from leaks. |
| Storage incompatibility | <ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents ▶ Avoid storage with reducing agents. |



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

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 | propylene glycol monomethyl ether - mixture of isomers | Propylene glycol monomethyl ether | 369 mg/m ³ / 100 ppm | 553 mg/m ³ / 150 ppm | Not Available | Not Available |
| Australia Exposure Standards | ethanol | Ethyl alcohol | 1880 mg/m ³ / 1000 ppm | Not Available | Not Available | Not Available |
| Australia Exposure Standards | n-butanol | n-Butyl alcohol | Not Available | Not Available | 152 mg/m ³ / 50 ppm | Not Available |

Continued...


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EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|--|--|---------------|---------------|-------------|
| polypropylene fibre | Polypropylene | 5.2 mg/m3 | 58 mg/m3 | 350 mg/m3 |
| propylene glycol monomethyl ether - mixture of isomers | Propylene glycol monomethyl ether; (Ucar Triol HG-170) | 100 ppm | 160 ppm | 660 ppm |
| polyethylene | Polyethylene | 28 mg/m3 | 310 mg/m3 | 1,000 mg/m3 |
| ethanol | Ethyl alcohol; (Ethanol) | Not Available | Not Available | 15000 ppm |
| n-butanol | Butyl alcohol, n-; (n-Butanol) | 60 ppm | 800 ppm | 8000 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|--|-----------------|---------------|
| polypropylene fibre | Not Available | Not Available |
| polyester | Not Available | Not Available |
| propylene glycol monomethyl ether - mixture of isomers | Not Available | Not Available |
| polyethylene | Not Available | Not Available |
| ethanol | 3,300 [LEL] ppm | Not Available |
| resin | Not Available | Not Available |
| n-butanol | 1,400 [LEL] ppm | Not Available |
| solvent dyes | Not Available | Not Available |
| acrylic | Not Available | Not Available |
| cap-off additives | Not Available | Not Available |

Exposure controls

| | |
|---|---|
| Appropriate engineering controls | <p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. |
| Skin protection | See Hand protection below |
| Hands/feet protection | <p>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.</p> <p>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.</p> <p>Personal hygiene is a key element of effective hand care.</p> <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <ul style="list-style-type: none"> ▶ polychloroprene. ▶ nitrile rubber. ▶ butyl rubber. |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream. |
| 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:

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| Material | CPI |
|------------------|-----|
| BUTYL | C |
| HYPALON | C |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |

Respiratory protection

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

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES | A P1 Air-line* | - - | A PAPR-P1 - |
| up to 50 x ES | Air-line** | A P2 | A PAPR-P2 |
| up to 100 x ES | - | A P3 Air-line* | - |
| 100+ x ES | - | Air-line** | A PAPR-P3 |

| | |
|-------------|---|
| NEOPRENE | C |
| NITRILE | C |
| NITRILE+PVC | C |
| PE | C |
| PE/EVAL/PE | C |
| PVA | C |
| PVC | C |
| TEFLON | C |

* 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.

* - Negative pressure demand ** - Continuous flow

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)

- ▶ Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- ▶ The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- ▶ Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- ▶ Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- ▶ Use approved positive flow mask if significant quantities of dust becomes airborne.
- ▶ Try to avoid creating dust conditions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---|--|--|----------------|
| Appearance | Coloured solid; not miscible with water. | | |
| Physical state | Solid | Relative density (Water = 1) | <1 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Applicable | Decomposition temperature | >250 |
| Melting point / freezing point (°C) | >165 | Viscosity (cSt) | Not Applicable |
| Initial boiling point and boiling range (°C) | Not Applicable | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | >200 | Taste | Not Available |
| Evaporation rate | Not Applicable | Explosive properties | Not Available |
| Flammability | Not Applicable | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Applicable |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water (g/L) | Immiscible | pH as a solution (1%) | Not Applicable |
| Vapour density (Air = 1) | Not Available | VOC g/L | 147.7 |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ 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 dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. |
| Ingestion | The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. |
| Skin Contact | Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. |
| Eye | Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. |
| Chronic | Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. |

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|--|--|------------------------------------|
| Dy-Mark iFine Ink Marker All Colours | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| polypropylene fibre | TOXICITY | IRRITATION |
| | Oral (mouse) LD50: 3200 mg/kg ^[2] | Not Available |
| propylene glycol monomethyl ether - mixture of isomers | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[1] | Eye (rabbit) 230 mg mild |
| | Inhalation (rat) LC50: 12485.7375 mg/l/5h.d ^[2] | Eye (rabbit) 500 mg/24 h. - mild |
| | Oral (rat) LD50: 3739 mg/kg ^[2] | Skin (rabbit) 500 mg open - mild |
| polyethylene | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >2000 mg/kg ^[2] | Not Available |
| | Inhalation (mouse) LC50: 1.5 mg/l/30m ^[2] | |
| | Oral (rat) LD50: >3000 mg/kg ^[2] | |
| ethanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 17100 mg/kg ^[1] | Eye (rabbit): 500 mg SEVERE |
| | Inhalation (rat) LC50: 63926.976 mg/l/4h ^[2] | Eye (rabbit): 100mg/24hr-moderate |
| | Oral (rat) LD50: 7060 mg/kg ^[2] | Skin (rabbit): 20 mg/24hr-moderate |
| | | Skin (rabbit): 400 mg (open)-mild |
| n-butanol | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: 3400 mg/kg ^[2] | Eye (human): 50 ppm - irritant |
| | Inhalation (rat) LC50: 24 mg/l/4H ^[2] | Eye (rabbit): 1.6 mg-SEVERE |
| | Oral (rat) LD50: 790 mg/kg ^[2] | Eye (rabbit): 24 mg/24h-SEVERE |
| | | Skin (rabbit): 405 mg/24h-moderate |

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

| | |
|--|---|
| POLYPROPYLENE FIBRE | The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. polypropylene |
| PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS | No significant acute toxicological data identified in literature search. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. NOTE: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. Fetotoxic effects were seen in rats but not in rabbits at this concentration; maternal toxicity was noted in both species. |
| N-BUTANOL | Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. For n-butanol: Acute toxicity: In animal testing, n-butanol (BA) was only slightly toxic, following exposure by swallowing, skin contact or irritation. Animal testing and human experience suggest that n-butanol is moderately irritating to the skin but severely irritating to the eye. Human studies show that BA is not likely to cause skin sensitization. Warning of exposure occurs before irritation of the nose, because n-butanol has an odour which can be detected below concentration levels cause irritation. |
| Dy-Mark iFine Ink Marker All Colours & PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS | For propylene glycol ethers (PGEs): Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM). Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on the reproductive organs, the developing embryo and foetus, blood or thymus gland, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces and alkoxyacetic acid. |
| PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS & N-BUTANOL | 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. |

| | | | |
|--------------------------------------|---|-------------------------------|---|
| Acute Toxicity | ☹ | Carcinogenicity | ☹ |
| Skin Irritation/Corrosion | ☹ | Reproductivity | ☹ |
| Serious Eye Damage/Irritation | ☹ | STOT - Single Exposure | ☹ |

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|-----------------------------------|---|--------------------------|---|
| Respiratory or Skin sensitisation | ☒ | STOT - Repeated Exposure | ☒ |
| Mutagenicity | ☒ | Aspiration Hazard | ☒ |

Legend: ✗ – Data available but does not fill the criteria for classification
✔ – Data available to make classification
☒ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| Dy-Mark iFine Ink Marker All Colours | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--|---------------|--------------------|-------------------------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| polypropylene fibre | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether - mixture of isomers | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | =4600mg/L | 1 |
| | EC50 | 48 | Crustacea | >500mg/L | 1 |
| | NOEC | 96 | Fish | =4600mg/L | 1 |
| polyethylene | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| ethanol | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | 42mg/L | 4 |
| | EC50 | 48 | Crustacea | 2mg/L | 4 |
| | EC50 | 96 | Algae or other aquatic plants | 17.921mg/L | 4 |
| | NOEC | 2016 | Fish | 0.000375mg/L | 4 |
| n-butanol | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | 100.000mg/L | 4 |
| | EC50 | 48 | Crustacea | >500mg/L | 1 |
| | EC50 | 96 | Algae or other aquatic plants | 225mg/L | 2 |
| | BCF | 24 | Fish | 921mg/L | 4 |
| | EC3 | 192 | Algae or other aquatic plants | >=100mg/L | 1 |
| | NOEC | 48 | Crustacea | 415mg/L | 2 |

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

For Propylene Glycol Ethers: log Kow's range from 0.309 for TPM to 1.523 for DPnB. Calculated BCFs range from 1.47 for DPnB to 3.16 for DPMA and TPM, indicating low bioaccumulation. Henry's Law Constants are low for all category members, ranging from 5.7×10^{-9} atm-m³/mole for TPM to 2.7×10^{-9} atm-m³/mole for PnB.

Environmental Fate: Most are liquids at room temperature and all are water-soluble.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|--|-----------------------------|-----------------------------|
| polypropylene fibre | LOW | LOW |
| propylene glycol monomethyl ether - mixture of isomers | LOW (Half-life = 56 days) | LOW (Half-life = 1.7 days) |
| polyethylene | LOW | LOW |
| ethanol | LOW (Half-life = 2.17 days) | LOW (Half-life = 5.08 days) |
| n-butanol | LOW (Half-life = 54 days) | LOW (Half-life = 3.65 days) |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|--|-----------------------|
| polypropylene fibre | LOW (LogKOW = 1.6783) |
| propylene glycol monomethyl ether - mixture of isomers | LOW (BCF = 2) |
| polyethylene | LOW (LogKOW = 1.2658) |
| ethanol | LOW (LogKOW = -0.31) |

Continued...

| | |
|-----------|------------------|
| n-butanol | LOW (BCF = 0.64) |
|-----------|------------------|

Mobility in soil

| Ingredient | Mobility |
|--|----------------------|
| polypropylene fibre | LOW (KOC = 23.74) |
| propylene glycol monomethyl ether - mixture of isomers | HIGH (KOC = 1) |
| polyethylene | LOW (KOC = 14.3) |
| ethanol | HIGH (KOC = 1) |
| n-butanol | MEDIUM (KOC = 2.443) |

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

| | |
|-------------------------------------|---|
| Product / Packaging disposal | <ul style="list-style-type: none"> ▶ Recycle wherever possible. ▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material) ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed. |
|-------------------------------------|---|

SECTION 14 TRANSPORT INFORMATION**Labels Required**

| | |
|-------------------------|----------------|
| Marine Pollutant | NO |
| HAZCHEM | Not Applicable |

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****POLYPROPYLENE FIBRE(9003-07-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

| | |
|---|---|
| Australia Inventory of Chemical Substances (AICS) | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |
|---|---|

PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS(107-98-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

POLYETHYLENE(9002-88-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|---|---|
| Australia Inventory of Chemical Substances (AICS) | International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs |
|---|---|

ETHANOL(64-17-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

N-BUTANOL(71-36-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|--|---|
| Australia Exposure Standards | Australia Inventory of Chemical Substances (AICS) |
| Australia Hazardous Substances Information System - Consolidated Lists | |

| National Inventory | Status |
|-------------------------------|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (n-butanol; polyethylene; ethanol; polypropylene fibre) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | N (polyethylene; polypropylene fibre) |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |

Dy-Mark iFine Ink Marker All Colours

| | |
|----------------|--|
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION**Other information****Ingredients with multiple cas numbers**

| Name | CAS No |
|---|--|
| propylene glycol monomethyl ether - mixture of isomers | 107-98-2, 1320-67-8., 28677-93-2 |
| polyethylene | 9002-88-4, 101484-63-3, 101484-75-7, 101484-82-6, 1021428-03-4, 103843-11-4, 106705-26-4, 110736-46-4, 11098-28-5, 11119-24-7, 11119-25-8, 112041-35-7, 112821-11-1, 112821-13-3, 113690-26-9, 1137119-09-5, 114013-55-7, 114451-17-1, 114471-09-9, 1187527-29-2, 121761-95-3, 1227178-23-5, 1228118-98-6, 126040-16-2, 126040-17-3, 126879-40-1, 12728-29-9, 1281939-84-1, 131461-84-2, 131461-85-3, 1365657-57-3, 1365657-58-4, 136958-80-0, 1383916-56-0, 1393813-70-1, 142985-61-3, 150632-74-9, 151595-17-4, 153302-16-0, 156799-29-0, 159251-50-0, 160612-77-1, 161051-67-8, 163751-84-6, 172451-63-7, 174594-04-8, 176365-96-1, 177529-72-5, 177771-90-3, 177893-37-7, 183076-46-2, 184182-05-6, 187619-93-8, 189120-95-4, 191490-32-1, 199128-49-9, 201948-42-7, 202876-24-2, 208196-83-2, 211174-40-2 |

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.

The 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.

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average
 PC – STEL: Permissible Concentration-Short Term Exposure Limit
 IARC: International Agency for Research on Cancer
 ACGIH: American Conference of Governmental Industrial Hygienists
 STEL: Short Term Exposure Limit
 TEEL: Temporary Emergency Exposure Limit,
 IDLH: Immediately Dangerous to Life or Health Concentrations
 OSF: Odour Safety Factor
 NOAEL :No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
 TLV: Threshold Limit Value
 LOD: Limit Of Detection
 OTV: Odour Threshold Value
 BCF: BioConcentration Factors
 BEI: Biological Exposure Index

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