
Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DY-MARK LINE MARKING TOLUENE FREE AEROSOL WHITE AND YELLOW

PROPER SHIPPING NAME

AEROSOLS

PRODUCT USE

» Application is by spray atomisation from a hand held aerosol pack.
Used according to manufacturer's directions.

SUPPLIER

Company: Dy- Mark Pty Ltd
Address:
89 Formation Street
Wacol
QLD, 4076
AUS
Telephone: +61 7 3271 2222
Fax: +61 7 3271 2751

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE**HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.****POISONS SCHEDULE**

S5

RISK

Risk Codes

R12
R20/21
R36/38
R44
R52
R67

Risk Phrases

» Extremely flammable.
» Harmful by inhalation and in contact with skin.
» Irritating to eyes and skin.
» Risk of explosion if heated under confinement.
» Harmful to aquatic organisms.
» Vapours may cause drowsiness and dizziness.

SAFETY

Safety Codes

S16
S23
S51
S09
S53
S401

S07
S13
S26

S46

S60

Safety Phrases

» Keep away from sources of ignition. No smoking.
» Do not breathe gas/fumes/vapour/spray.
» Use only in well ventilated areas.
» Keep container in a well ventilated place.
» Avoid exposure - obtain special instructions before use.
» To clean the floor and all objects contaminated by this material use water and detergent.
» Keep container tightly closed.
» Keep away from food drink and animal feeding stuffs.
» In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
» If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).
» This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
xylene	1330-20-7	10-30
acetone	67-64-1	10-30
dimethyl ether	115-10-6	10-30
resin, nonhazardous		10-30
pigment and filler, nonhazardous		10-30

Section 4 - FIRST AID MEASURES

SWALLOWED

- » - Avoid giving milk or oils.
- Avoid giving alcohol.
- Not considered a normal route of entry.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

EYE

- » If aerosols come in contact with the eyes:
 - Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes 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.

SKIN

- » If solids or aerosol mists are deposited upon the skin:
 - Flush skin and hair with running water (and soap if available).
- Remove any adhering solids with industrial skin cleansing cream.

INHALED

- » If aerosols, fumes or combustion products are inhaled:
 - Remove to fresh air.
- Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

- » Treat symptomatically.
- for lower alkyl ethers:

BASIC TREATMENT

-
- Establish a patent airway with suction where necessary.
 - Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- For acute or short term repeated exposures to acetone:
- Symptoms of acetone exposure approximate ethanol intoxication.
 - About 20% is expired by the lungs and the rest is metabolised. Alveolar air half-life is about 4 hours following two hour inhalation at levels near the Exposure Standard; in overdose, saturable metabolism and limited clearance, prolong the elimination half-life to 25-30 hours.
- For acute or short term repeated exposures to xylene:
- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
 - Pulmonary absorption is rapid with about 60-65% retained at rest.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- » SMALL FIRE:
 - Water spray, dry chemical or CO₂

LARGE FIRE:

- Water spray or fog.

FIRE FIGHTING

- » FOR FIRES INVOLVING MANY GAS CYLINDERS:
 - To stop the flow of gas, specifically trained personnel may inert the atmosphere to reduce oxygen levels thus allowing the capping of leaking container(s).
 - Reduce the rate of flow and inject an inert gas, if possible, before completely stopping the flow to prevent flashback.
 - Alert Fire Brigade and tell them location and nature of hazard.
 - May be violently or explosively reactive.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

FIRE/EXPLOSION HAZARD

- » - Liquid and vapour are highly flammable.
 - Severe fire hazard when exposed to heat or flame.
- Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.
- Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

FIRE INCOMPATIBILITY

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

HAZCHEM: 2YE

Personal Protective Equipment

Gas tight chemical resistant suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- » - Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.

MAJOR SPILLS

- » - Remove leaking cylinders to a safe place.
- Fit vent pipes. Release pressure under safe, controlled conditions.
- DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- » - Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

SUITABLE CONTAINER

- » - Aerosol dispenser.
- Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

- » Xylenes:
 - may ignite or explode in contact with strong oxidisers, 1,3-dichloro-5,5-dimethylhydantoin, uranium fluoride
 - attack some plastics, rubber and coatings.
 - Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents.
 - Aromatics can react exothermically with bases and with diazo compounds.

Acetone:

- may react violently with chloroform, activated charcoal, aliphatic amines, bromine, bromine trifluoride, chlorotriazine, chromic(IV) acid, chromic(VI) acid, chromium trioxide, chromyl chloride, hexachloromelamine, iodine heptafluoride, iodoform, liquid oxygen, nitrosyl chloride, nitrosyl perchlorate, nitryl perchlorate, perchloromelamine, peroxomonosulfuric acid, platinum, potassium tert-butoxide, strong acids, sulfur dichloride, trichloromelamine, xenon tetrafluoride
- reacts violently with bromoform and chloroform in the presence of alkalis or in contact with alkaline surfaces.

For alkyl aromatics:

The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring.

- Ethers may react violently with strong oxidising agents and acids.
- Ethers are generally stable to water under neutral conditions and ambient temperatures. The ether function is hydrolysed by heating in the presence of halogen acids, particularly hydrogen iodide.

Ketones in this group:

- are reactive with many acids and bases liberating heat and flammable gases (e.g., H₂).
- react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H₂) and heat.
- The tendency of many ethers to form explosive peroxides is well documented.
- Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe.
- Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances.

STORAGE REQUIREMENTS

- » - Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can.
- Store in original containers in approved flammable liquid storage area.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
Australia Exposure Standards	xylene (Xylene (o-, m-, p- isomers))	80	350	150	655
Australia Exposure Standards	acetone (Acetone)	500	1185	1000	2375
Australia Exposure Standards	dimethyl ether (Dimethyl ether)	400	760	500	950

PERSONAL PROTECTION

RESPIRATOR

Type AXNO Filter of sufficient capacity

EYE

- » - Safety glasses with side shields.
- Chemical goggles.

HANDS/FEET

- » - No special equipment needed when handling small quantities.
- OTHERWISE:

OTHER

- » No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Skin cleansing cream.
- The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.
- Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.

ENGINEERING CONTROLS

- » General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

» Note that all of the monopropylene glycol ethers may exist in two isomeric forms, alpha or beta. The alpha form, which is thermodynamically favored during synthesis, consists of a secondary alcohol configuration.
Supplied as an aerosol pack. Contents under PRESSURE.
White or yellow flammable liquid; does not mix with water.

PHYSICAL PROPERTIES

Liquid.
Gas.
Does not mix with water.

Molecular Weight: Not Applicable
Melting Range (°C): Not Available
Solubility in water (g/L): Immiscible
pH (1% solution): Not Applicable
Volatile Component (%vol): Not Available
Relative Vapour Density (air=1): Not Available
Lower Explosive Limit (%): Not Available
Autoignition Temp (°C): Not Available
State: Liquid

Boiling Range (°C): Not Available
Specific Gravity (water=1): Not Available
pH (as supplied): Not Applicable
Vapour Pressure (kPa): Not Available
Evaporation Rate: Not Available
Flash Point (°C): Not Available
Upper Explosive Limit (%): Not Available
Decomposition Temp (°C): Not Available
Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- » - Elevated temperatures.
 - Presence of open flame.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS**ACUTE HEALTH EFFECTS**

- » Harmful by inhalation and in contact with skin.
- » Irritating to eyes and skin.
- » Vapours may cause dizziness or suffocation.
- » Vapours may cause drowsiness and dizziness.

TOXICITY AND IRRITATION

- » unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

» 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.

for acetone:

The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin.

CHRONIC HEALTH EFFECTS

- » Not applicable.

XYLENE:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (human) LDLo: 50 mg/kg
 Oral (rat) LD50: 4300 mg/kg
 Inhalation (human) TClO: 200 ppm
 Inhalation (man) LCLo: 10000 ppm/6h
 Inhalation (rat) LC50: 5000 ppm/4h
 Oral (Human) LD: 50 mg/kg
 Inhalation (Human) TClO: 200 ppm/4h
 Intraperitoneal (Rat) LD50: 2459 mg/kg
 Subcutaneous (Rat) LD50: 1700 mg/kg
 Oral (Mouse) LD50: 2119 mg/kg
 Intraperitoneal (Mouse) LD50: 1548 mg/kg
 Intravenous (Rabbit) LD: 129 mg/kg
 Inhalation (Guinea pig): LC 450 ppm/4h

» 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.

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.

Reproductive effector in rats

IRRITATION

Skin (rabbit):500 mg/24h Moderate
 Eye (human): 200 ppm Irritant
 Eye (rabbit): 87 mg Mild
 Eye (rabbit): 5 mg/24h SEVERE

ACETONE:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (man) TDLo: 2857 mg/kg
 Oral (rat) LD50: 5800 mg/kg
 Inhalation (human) TClO: 500 ppm
 Inhalation (man) TClO: 12000 ppm/4 hr
 Inhalation (man) TClO: 10 mg/m³/6 hr
 Inhalation (rat) LC50: 50100 mg/m³/8 hr
 Dermal (rabbit) LD50: 20000 mg/kg

» 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.

for acetone:

The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin.

IRRITATION

Eye (human): 500 ppm - Irritant
 Eye (rabbit): 3.95 mg - SEVERE
 Eye (rabbit): 20mg/24hr - Moderate
 Skin (rabbit):395mg (open) - Mild
 Skin (rabbit): 500 mg/24hr - Mild

DIMETHYL ETHER:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Inhalation (rat) LC50: 308000 mg/m³

IRRITATION

Nil Reported

CARCINOGEN

xylylene	International Agency for Research on Cancer (IARC) Carcinogens	Group	3
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REPROTOXIN

xylylene	ILO Chemicals in the electronics industry that have toxic effects on reproduction	Reduced fertility or sterility
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Section 12 - ECOLOGICAL INFORMATION

Harmful to aquatic organisms.

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulat ion	Mobility
DY- MARK LINE MARKING TOLUENE FREE AEROSOL WHITE AND YELLOW		No data		
xylylene		No data	LOW	
acetone		No data	LOW	HIGH
dimethyl ether		No data	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- » - DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: FLAMMABLE GAS

HAZCHEM: 2YE (ADG7)

ADG7:

Class or division:	2	Subsidiary risk:	None
UN No.:	1950	UN packing group:	None
Special provisions:	63, 190, 277, 327	Packing Instructions:	None
Notes:	None	Limited quantities:	See SP 277
Packagings and IBCs -	P003, LP02	Packagings and IBCs -	PP17, PP87, L2
Packing instruction:		Special packing provisions:	

Shipping Name:AEROSOLS

Land Transport UNDG:

Class or division:	2	Subsidiary risk:	None
UN No.:	1950	UN packing group:	None

Shipping Name:AEROSOLS

Air Transport IATA:

ICAO/IATA Class:	2.1	ICAO/IATA Subrisk:	None
UN/ID Number:	1950	Packing Group:	None
Special provisions:	A145 A153		

Shipping Name: AEROSOLS, FLAMMABLE

Maritime Transport IMDG:

IMDG Class:	2.1	IMDG Subrisk:	SP63
UN Number:	1950	Packing Group:	None
EMS Number:	F- D, S- U	Special provisions:	63 190 277 327 959
Limited Quantities:	See SP277	Marine Pollutant:	Not Determined

Shipping Name: AEROSOLS

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: S5**REGULATIONS**

DY-MARK LINE MARKING TOLUENE FREE AEROSOL WHITE AND YELLOW (CAS: None):

No regulations applicable

Regulations for ingredients

xylene (CAS: 1330-20-7) is found on the following regulatory lists;

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - organic compounds)

Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Domestic water quality

Australia Exposure Standards

Australia Hazardous Substances

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

Australia National Pollutant Inventory

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix I

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6

GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk

IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products

International Agency for Research on Cancer (IARC) Carcinogens

International Council of Chemical Associations (ICCA) - High Production Volume List

OECD Representative List of High Production Volume (HPV) Chemicals

WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

acetone (CAS: 67-64-1) 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

Australia Exposure Standards

Australia Hazardous Substances

Australia High Volume Industrial Chemical List (HVICL)

continued...

Australia Illicit Drug Reagents/Essential Chemicals - Category III
Australia Inventory of Chemical Substances (AICS)
Australia National Pollutant Inventory
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix F (Part 3)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 18: List of products to which the Code does not apply
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products
OECD Representative List of High Production Volume (HPV) Chemicals
United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II
United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control - Table II

dimethyl ether (CAS: 115-10-6) is found on the following regulatory lists;

Australia Exposure Standards
Australia Hazardous Substances
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - 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.

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This is the end of the MSDS.