



Material Safety Data Sheet

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Issue date: June 2010

DOP

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: DOP

Synonym: Dioctyl phthalate, Di-sec-octyl phthalate, Di-(2-ethylhexyl) phthalate, DEHP

Use: Polyurethane Plasticiser

Era Polymers Pty Ltd
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East Botany NSW 2019
Australia
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Emergency Advice All Hours:
Technical Manager +61 2 9666 3788

2. HAZARDS IDENTIFICATION

HAZARDOUS ACCORDING TO NOHSC CRITERIA

Hazard Category: Toxic (T)

Hazard Classification: HAZARDOUS SUBSTANCE, NON-DANGEROUS GOOD

RISK PHRASES

R60 May impair fertility.

R61 May cause harm to the unborn child.

SAFETY PHRASES

S36/37 Wear suitable protective clothing and gloves.

S45 In case of accident or if you feel unwell, contact a doctor immediately and show this container or label.

S53 Avoid exposure - obtain special instructions before use.

Poison Schedule: None allocated [Aust].

Warning Statement:

Avoid exposure, especially to pregnant women.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
DIOCTYL PHTHALATE	Greater than 60%	117-81-7

All other ingredients not hazardous according to NOHSC Criteria.

4. FIRST AID MEASURES

Swallowed:

If swallowed, DO NOT induce vomiting. Rinse mouth with water and, if person is conscious, give a glass of water to drink. If vomiting occurs, give further water. Seek medical attention.

Eye:

If material is splashed into eyes, immediately, flush with plenty of water for 15 minutes, ensuring eyelids are held open. In all cases of eye contamination, it is a sensible precaution to seek medical attention.



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Skin:

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with water and soap. Flush skin with water. Seek medical attention if irritation persists after washing.

Inhaled:

Remove victim to fresh air. Apply resuscitation if victim is not breathing. If trained personnel available administer oxygen if breathing is difficult. Seek medical attention if effects persist.

First Aid Facilities:

Eye wash fountain, safety shower and normal washroom facilities.

Advice to Doctor:

Treat symptomatically.

In case of poisoning, contact Poisons Information Centre

In Australia call Tel: 131126

In New Zealand Tel: 034747000

5. FIRE-FIGHTING MEASURES

Fire/Explosion Hazard

If safe to do so, move undamaged containers from fire area.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes on heating emitting toxic fumes including carbon monoxide and carbon dioxide.

FIRE FIGHTING PROCEDURES: Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

EXTINGUISHING MEDIA: Use water fog (or if unavailable use fine water spray), foam or dry agent (carbon dioxide or chemical powder). Use water spray to cool fire-exposed containers and for large fires.

HAZCHEM CODE: None allocated [Aust]

FLAMMABILITY

Combustible liquid - Store in accordance with dangerous goods.

6. ACCIDENTAL RELEASE MEASURES

Material may be slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work upwind or increase ventilation. Contain - prevent run-off into drains and waterways. Use absorbent such as soil, sand or other inert material. Collect and seal in properly labelled containers or drums for disposal. Wash down area with detergent and excess water.

7. HANDLING AND STORAGE

HANDLING ADVICE:

Avoid skin and eye contact. Avoid breathing in vapour, mists and aerosols.

STORAGE ADVICE:

Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

Classified as a C2 Combustible Liquid for the purpose of storage and handling, in accordance with AS1940. Refer to State Regulations for storage and transport requirements.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:

DIOCTYL PHTHALATE

(Worksafe Australia)

[TWA] 5 mg/m³

[STEL] 10 mg/m³

References: H

(ACGIH)

Carcinogen Category: A3

Engineering Controls:

Ensure ventilation is adequate to maintain air concentration levels below Exposure Standards. If inhalation risk exists, use with local exhaust ventilation or while wearing approved organic vapour / particulate respirator. Keep containers closed when not in use.

Personal Protection Equipment:

CLOTHING: Wear suitable protective clothing such as overalls to prevent skin contact.

GLOVES: Wear impervious gloves to prevent skin contact. Do NOT use gloves made from PVC.

EYES: Wear safety glasses with side shields, chemical goggles or face shield to protect eyes.

RESPIRATORY PROTECTION: Avoid breathing of vapours/gases. Select and use respirators in accordance with AS/NZS 1715/1716. The use of a respirator for organic vapours with (disposable) or with replaceable filters is recommended. Filter capacity and respirator type depends on exposure levels and type of contaminant. If entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless liquid
Boiling Point Melting Point:	Boiling range = 230-233°C @ 0.7kPa, Pour point = -46°C
Vapour Pressure:	0.18kPa @ 200°C
Specific Gravity:	0.983-0.985 @ 20°C
Flash Point:	200°C
Flammability Limits:	0.15-0.18% (vol %)
Solubility in Water:	0.000003g/L @ 20°C, immiscible with water

Other Properties

Autoignition temperature = 370°C

% Volatile by volume = 100%

Partition coefficient = 7.5 (log POW)

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

HAZARDOUS DECOMPOSITION PRODUCTS:

Emits toxic fumes including carbon monoxide and carbon dioxide when heated to decomposition.

HAZARDOUS POLYMERIZATION:

Will not occur.



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INCOMPATIBILITIES:

Reacts with strong oxidising agents.

CONDITIONS TO AVOID:

Heat, flames, ignition sources and incompatibles.

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected, if the product is handled in accordance with this Material Safety Data Sheet and the product label. Symptoms and effects that may arise if the product is mishandled and overexposure occurs are:

ACUTE HEALTH EFFECTS:

Swallowed:

Toxic if swallowed.

May cause irritation to mouth, throat and stomach with effects including mucous build up, irritation to the tongue and lips and pains in the stomach, which may lead to nausea, vomiting and diarrhoea.

Eye:

May cause irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision.

Skin:

Toxic by skin contact.

May cause irritation to the skin, with effects including: redness and itchiness.

Inhaled:

Toxic if inhaled.

May cause irritation to the nose, throat and respiratory system with effects including: dizziness, headache and loss of co-ordination.

Chronic:

Prolonged or repeated exposure may lead to irreversible damage to health.

Prolonged or repeated exposure may lead to permanent irreversible injury.

Available evidence from animal studies indicates that repeated or prolonged exposure to this material could result in effects on the reproductive system.

Toxicological Data:

Oral LD50 (rat) > 30,000 mg/kg

Dermal LD50 (rabbit) > 24,500 mg/kg

Skin: non-irritant (rabbit)

Eyes: non-irritant (rabbit)

Chronic administration of DOP in test animals has caused adverse effects on fertility. Effects seen in adult rats include decreased success in reproductive outcomes and testicular changes in male rats. Younger animals are more susceptible to DOP with adverse effects on the testes appearing at much lower doses than for older animals.

Recent studies in test animals suggest that DOP may have adverse effects on the unborn child when the mother is exposed during pregnancy. Effects have occurred in the male offspring only and the target system has been the genital system.

There is limited evidence of a carcinogenic potential for this substance. Chronic studies in rats and mice indicate that oral administration of DOP causes liver damage and cancer; however, similar studies in monkeys are negative for these effects.



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16. OTHER INFORMATION

Date of Preparation:

Issue date: 30 June 2010

Supersedes: July 2005

Reasons for Update:

Periodic review

Key Legend Information:

NOHSC - National Occupational Health & Safety Commission {Formerly Worksafe}[Aust]

SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]

AS/NZS 1716 - Respiratory protective devices. [Aust/NZ]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization [Int]

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods [Int]

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. [Int]

EU - European Union

[Aust/NZ] = Australian New Zealand

[Int] = International

[US] = United States of America

Removal of the heading of *Poison Schedule [Aust]*, in section 3 and 15 of this Material Safety Data Sheet (MSDS) makes this a valid health and safety document in other international jurisdictions/countries. For full compliance please contact your Federal, State or Local regulators for further information.

Disclaimer

This MSDS summarises our best knowledge of the health and safety hazard information available on the product and the measures to be used to handle and use the product safely. Each user should read this MSDS and consider the information in connection with the way the product is intended to be handled or used.

Principal References:

Information supplied by manufacturer, reference sources including the public domain.

END OF MSDS