

DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet
Issue Date: 4-Nov-2009
XC9477EC

CHEMWATCH 4743-46
Version No:2.0
CD 2009/2 Page 1 of 7

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DAMAR BORON CONCENTRATE

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

OTHER NAMES

"Product Code: APX0082"

PRODUCT USE

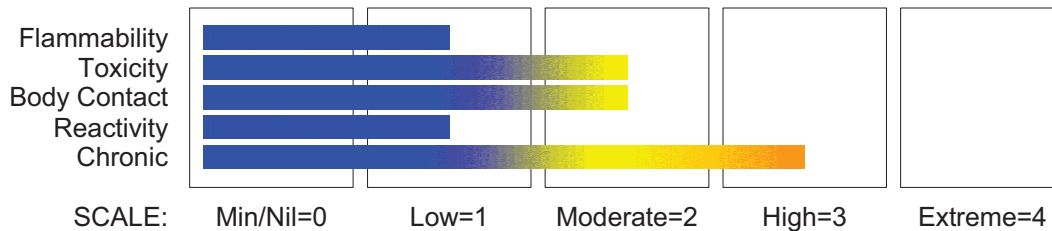
■ Used according to manufacturer's directions.
Wood treatment.

SUPPLIER

Company: Damar Industries Ltd
Address:
Eastgate Business Park, 800 Te Ngae Road
Rotorua,
New Zealand
Telephone: (0800) 334 475
Emergency Tel: 0800 CHEMCALL (0800 2436 2255)
Fax: (0800) 334 476
Email: sales@damarindustries.co.nz

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



GHS Classification

Acute Aquatic Hazard Category 1
Acute Toxicity (Oral) Category 4
Reproductive Toxicity Category 1B
Respiratory Irritation Category 3
Respiratory Sensitizer Category 1
Serious Eye Damage Category 1
Skin Corrosion/Irritation Category 2
Skin Sensitizer Category 1

EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by Chemwatch using GHS/HSNO criteria:
6.1D, 6.5A, 6.5B, 6.8A, 9.1A, 6.3A, 8.3A ERMA registration number HSR000907
May cause respiratory irritation
Harmful if swallowed
May cause allergic or asthmatic symptoms or breathing difficulties if inhaled
May cause allergic skin reaction
May damage fertility
Very toxic to aquatic life
Causes skin irritation
Causes serious eye damage

PRECAUTIONARY STATEMENTS

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.

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DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet
Issue Date: 4-Nov-2009
XC9477EC

CHEMWATCH 4743-46
Version No:2.0
CD 2009/2 Page 2 of 7
Section 2 - HAZARDS IDENTIFICATION

Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
In case of inadequate ventilation wear respiratory protection.

Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
Immediately call a POISON CENTER or doctor/physician.
Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
If skin irritation or rash occurs: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
Collect spillage.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
ethylene glycol	107-21-1	>60
disodium octaborate	12008-41-2	10-30
benzalkonium chloride	8001-54-5	0-2
2- octyl- 4- isothiazolin- 3- one	26530-20-1	0-<0.25

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED

- - 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.
- - Avoid giving milk or oils.
- - Avoid giving alcohol.
- - If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.
- - For advice, contact a Poisons Information Centre or a doctor.

EYE

- - If in eyes, hold eyelids apart and flush the eye continuously with running water.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).

INHALED

- - If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

- Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically.
- To treat poisoning by the higher aliphatic alcohols (up to C7):
- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- For acute or short term repeated exposures to ethylene glycol:
- Early treatment of ingestion is important. Ensure emesis is satisfactory.
- Test and correct for metabolic acidosis and hypocalcaemia.

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DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet
Issue Date: 4-Nov-2009
XC9477EC

CHEMWATCH 4743-46
Version No:2.0
CD 2009/2 Page 3 of 7

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- - Alcohol stable foam.
- Dry chemical powder.

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.

FIRE/EXPLOSION HAZARD

- - Combustible.
 - Slight fire hazard when exposed to heat or flame.
- Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.

FIRE INCOMPATIBILITY

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

Personal Protective Equipment

Gas tight chemical resistant suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Slippery when spilt.
- Remove all ignition sources.
- Clean up all spills immediately.

MAJOR SPILLS

- Slippery when spilt.
- Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite.
- The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na₂S₂O₅) or sodium bisulfite (NaHSO₃), or 12% sodium sulfite (Na₂SO₃) and 8% hydrochloric acid (HCl).

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- - 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.

SUITABLE CONTAINER

- - DO NOT use aluminium or galvanised containers.
- Metal can or drum
- Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY

- Alcohols
- are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.
- reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen.
- Avoid strong acids, bases.

STORAGE REQUIREMENTS

- - Material is hygroscopic, i.e. absorbs moisture from the air. Keep containers well sealed in storage.
- Store in original containers.
- Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	Peak ppm	Peak mg/m ³	Notes
New Zealand Workplace Exposure Standards (WES)	ethylene glycol (Ethylene glycol vapour & mist)	50	127	vapour & mist

The following materials had no OELs on our records
• disodium octaborate:

CAS:12008- 41- 2 CAS:12280- 03- 4

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DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet

Issue Date: 4-Nov-2009

XC9477EC

CHEMWATCH 4743-46

Version No:2.0

CD 2009/2 Page 4 of 7

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- benzalkonium chloride:
- 2- octyl- 4- isothiazolin- 3- one:

CAS:8001- 54- 5

CAS:26530- 20- 1

PERSONAL PROTECTION

RESPIRATOR

Type ANO-P Filter of sufficient capacity

EYE

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

HANDS/FEET

- - Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

Suitability and durability of glove type is dependent on usage. Factors such as:

- frequency and duration of contact,
- chemical resistance of glove material,.
- Butyl rubber gloves.
- Nitrile rubber gloves.

OTHER

- - Overalls.
- P.V.C. apron.

ENGINEERING CONTROLS

- Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Thin clear liquid with a mild soapy odour; miscible with water.

PHYSICAL PROPERTIES

Liquid.

Mixes with water.

Molecular Weight: Not Available
Melting Range (°C): Not Available
Solubility in water (g/L): Miscible
pH (1% solution): Not Available
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): 1.264
pH (as supplied): Not Available
Vapour Pressure (kPa): Not Available
Evaporation Rate: Not Available
Flash Point (°C): >110
Upper Explosive Limit (%): Not Available
Decomposition Temp (°C): Not Available
Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- - Presence of incompatible materials.
- Product is considered stable.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

GHS Hazard Phrases

May cause respiratory irritation
Harmful if swallowed
May cause allergic or asthmatic symptoms or breathing difficulties if inhaled
May cause allergic skin reaction

continued...

DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet
Issue Date: 4-Nov-2009
XC9477EC

CHEMWATCH 4743-46
Version No:2.0
CD 2009/2 Page 5 of 7
Section 11 - TOXICOLOGICAL INFORMATION

May damage fertility
Very toxic to aquatic life
Causes skin irritation
Causes serious eye damage

TOXICITY AND IRRITATION

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

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. 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.

For ethylene glycol:

Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow.

ETHYLENE GLYCOL:

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

TOXICITY

Oral (rat) LD50: 4700 mg/kg
Oral (human) LDLo: 398 mg/kg
Oral (child) TDLo: 5500 mg/kg
Inhalation (human) TCLo: 10000 mg/m³
Dermal (rabbit) LD50: 9530 mg/kg
Inhalation (rat) LC50: 50100 mg/m³/8 hr

■ For ethylene glycol:

Ethylene glycol is quickly and extensively absorbed through the gastrointestinal tract. Limited information suggests that it is also absorbed through the respiratory tract; dermal absorption is apparently slow.

[Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica]

Substance is reproductive effector in rats (birth defects).

Mutagenic to rat cells.

IRRITATION

Skin (rabbit): 555 mg(open)- Mild
Eye (rabbit): 100 mg/1h - Mild
Eye (rabbit): 1440mg/6h- Moderate
Eye (rabbit): 500 mg/24h - Mild
Eye (rabbit): 12 mg/m³/3D

DISODIUM OCTABORATE:

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

TOXICITY

Oral (rat) LD50: 2000 mg/kg
Oral (rat) LD50: 2550 mg/kg ** Van Waters & Rogers

IRRITATION

Nil Reported

BENZALKONIUM CHLORIDE:

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

TOXICITY

Oral (rat) LD50: 240 mg/kg
Dermal (rabbit) LD50: 1560 mg/kg

IRRITATION

Skin (human): 0.15 mg/72h Mild
Eye (human): 0.05 mg SEVERE
Eye (rabbit): 1mg/24h SEVERE

■ 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.

For alkyldimethylbenzylammonium chlorides (ADMBAC):

Alkyldimethylbenzylammonium chlorides (ADMBAC) are included in Annex 1 of list of dangerous substances of Council Directive 67/548/EEC with the following classification: C8-18 ADMBAC are classified as Harmful (Xn) with the risk phrases R21/22 (Harmful in contact with skin and if swallowed) and Corrosive (C) with R34 (Causes burns) and (N) with R50 (Very toxic to aquatic organisms).

Acute toxicity: Absorption of these alkyldimethylbenzylammonium (ADMBAC) cationic surfactants through the skin is anticipated to be low.

2-OCTYL-4-ISOTHIAZOLIN-3-ONE:

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

TOXICITY

Oral (rat) LD50: 550 mg/kg
Dermal (rabbit) LD50: 690 mg/kg
Oral (male) rat: LD50 248 mg/kg
Oral (female) rat: LD50 293 mg/kg
Dermal (male) rabbit: LD50 311 mg/kg

IRRITATION

Skin (rabbit): 500 mg/24 hours
Eye(rabbit):100 mg SEVERE
Skin (rabbit): 45% conc SEVERE
Eye (rabbit): 45% conc CORROSIVE
Eye (rabbit): 5% conc Moderate
Eye (rabbit): 0.5% non Irritant

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

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.

ROHM & HAAS Data

ADI: 0.03 mg/kg/day

NOEL: 60 mg/kg/day

continued...

DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet

Issue Date: 4-Nov-2009

XC9477EC

CHEMWATCH 4743-46

Version No:2.0

CD 2009/2 Page 6 of 7

Section 12 - ECOLOGICAL INFORMATION

benzalkonium chloride 72 or 96hr ErC50 (0.54) mg/L Green algae Plant Source:
2-octyl-4-isothiazolin-3-one 96 hr LC50 (0.0655) mg/L Rainbow trout,donaldson trout Fish Source: Calculated

Very toxic to aquatic organisms.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulat ion	Mobility
Damar Boron Concentrate		No data		
ethylene glycol		No data		
disodium octaborate		No data		
benzalkonium chloride		No data		
2- octyl- 4- isothiazolin- 3- one		No data		

Section 13 - DISPOSAL CONSIDERATIONS

- - Containers may still present a chemical hazard/ danger when empty.
 - Return to supplier for reuse/ recycling if possible.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
- 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.
 - Recycle wherever possible or consult manufacturer for recycling options.
 - Consult State Land Waste Authority for disposal.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

Regulations for ingredients

ethylene glycol (CAS: 107-21-1) is found on the following regulatory lists;

"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 List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "International Council of Chemical Associations (ICCA) - High Production Volume Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances and New Organisms (HSNO) Act - Pesticides", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Scheduled Toxic Substances and New Organisms (HSNO) Act - Timber Preservatives, Antisapstains and Antifouling Paints", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Limits (NZWEL) List of High Production Volume (HPV) Chemicals"

disodium octaborate (CAS: 12008-41-2,12280-03-4) is found on the following regulatory lists;

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "OECD Representative List of High Production Volume (HPV) Chemicals"

benzalkonium chloride (CAS: 8001-54-5) is found on the following regulatory lists;

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Register", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Pesticides", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Timber Preservatives, Antifouling Paints", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Veterinary Medicines", "New Zealand Inventory of Chemicals (NZIoC)"

2-octyl-4-isothiazolin-3-one (CAS: 26530-20-1) is found on the following regulatory lists;

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Register", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Pesticides", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Timber Preservatives, Antifouling Paints", "New Zealand Inventory of Chemicals (NZIoC)"

No data for Damar Boron Concentrate (CW: 4743-46)

Specific advice on controls required for materials used in New Zealand can be found at <http://www.ermanz.govt.nz/search/register.html>

continued...

DAMAR BORON CONCENTRATE

Chemwatch Material Safety Data Sheet
Issue Date: 4-Nov-2009
XC9477EC

CHEMWATCH 4743-46
Version No:2.0
CD 2009/2 Page 7 of 7

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE
0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
disodium octaborate	12008- 41- 2, 12280- 03- 4

■ 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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