

# Seam Tape

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

Hazard Alert Code: MODERATE

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 1 of 14

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Seam Tape

### SYNONYMS

"seam sealing tape"

### PRODUCT USE

Seam and sealing tape.

### SUPPLIER

Company: Ardex Australia Pty Ltd

Address:

20 Powers Road

Seven Hills

NSW, 2147

Australia

Telephone: 1800 224 070

Emergency Tel: 1800 224 070 (Mon- Fri, 9am- 5pm)

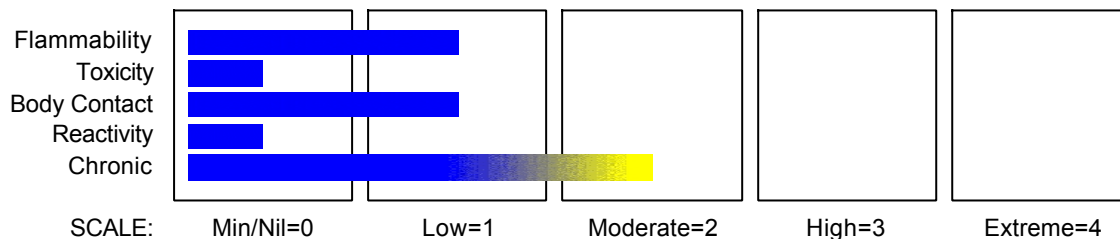
Fax: +61 2 9838 7817

## Section 2 - HAZARDS IDENTIFICATION

### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.** According to the Criteria of NOHSC, and the ADG Code.

### CHEMWATCH HAZARD RATINGS



### RISK

■ Limited evidence of a carcinogenic effect.

### SAFETY

• Avoid contact with skin.

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 2 of 14

## Section 2 - HAZARDS IDENTIFICATION

■ Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

■ Cumulative effects may result following exposure\*.

■ May produce discomfort of the eyes and respiratory tract\*.

\* (limited evidence).

• Avoid contact with eyes.

• Wear suitable protective clothing.

• Wear suitable gloves.

• Wear eye/face protection.

• To clean the floor and all objects contaminated by this material, use water and detergent.

• 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).

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME  | CAS RN     | %    |
|---|------------|------|
| Tape consisting of                                  |            |      |
| isobutylene homopolymer                             | 9003-27-4  | N/S  |
| 2-butene homopolymer - polybutene                   | 9003-29-6  | N/S  |
| ethylene/ propylene/ ethyldenenorbornene terpolymer | 25038-36-2 | N/S  |
| carbon black  | 1333-86-4  | 1-20 |
| isoprene/ isobutene copolymer (butyl rubber)        | 9010-85-9  | N/S  |
| zinc oxide  | 1314-13-2  | <2   |
| additives, unregulated                              |            | N/S  |
| on a  |            |      |
| polyethylene backing with release surface layer     |            |      |

## Section 4 - FIRST AID MEASURES

### 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.
- 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.

Not normally a hazard due to physical form of product.

### EYE

- Not normally a hazard due to physical form of product.

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet

Issue Date: 3-May-2013

A317LP

CHEMWATCH 8044-20

Version No:4.1.1.1

Page 3 of 14

Section 4 - FIRST AID MEASURES

## SKIN

- If skin or hair contact occurs:
    - Flush skin and hair with running water (and soap if available).
    - Seek medical attention in event of irritation.
- Not normally a hazard due to physical form of product.

## INHALED

- 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.

## NOTES TO PHYSICIAN

Treat symptomatically.

## Section 5 - FIRE FIGHTING MEASURES

### EXTINGUISHING MEDIA

- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.
- Water spray or fog - Large fires only.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Combustible.

NOTE: Burns with intense heat. Produces melting, flowing, burning liquid and dense acrid black smoke. Combustion products include: carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).

### FIRE INCOMPATIBILITY

- Avoid reaction with strong oxidisers.

### HAZCHEM

None

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 4 of 14

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

Sweep up.  
Collect recoverable product into labelled containers for recycling.  
Place in suitable containers for disposal.

### MAJOR SPILLS

Advise emergency services.  
Control personal contact with the substance, by using protective equipment.  
Collect recoverable product into labelled containers for recycling.  
Recover uncontaminated product in clean, dry, labelled containers.

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

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Atmosphere should be checked against exposure standards
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

### SUITABLE CONTAINER

No restriction on the type of containers.  
• Check that containers are clearly labelled.

### STORAGE INCOMPATIBILITY

Segregate from strong oxidisers, strong acids and alkalis.

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+ : May be stored together

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 5 of 14

Section 7 - HANDLING AND STORAGE

O: May be stored together with specific preventions  
X: Must not be stored together

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

| Source                             | Material                                 | TWA<br>ppm | TWA<br>mg/m <sup>3</sup> | STEL<br>ppm | STEL<br>mg/m <sup>3</sup> | Peak<br>ppm | Peak<br>mg/m <sup>3</sup> | TWA<br>F/CC | Notes   |
|------------------------------------|--|------------|--------------------------|-------------|---------------------------|-------------|---------------------------|-------------|---|
| Australia<br>Exposure<br>Standards | carbon black<br>(Carbon black)           |            | 3                        |             |                           |             |                           |             | NOHSC<br>documentation<br>available for<br>these values.  |
| Australia<br>Exposure<br>Standards | zinc oxide (Zinc<br>oxide (fume))        |            | 5                        |             | 10                        |             |                           |             | American<br>Conference of<br>Governmental<br>Industrial<br>Hygienists<br>(ACGIH)4, 5 is<br>the<br>documentation<br>source |
| Australia<br>Exposure<br>Standards | zinc oxide (Zinc<br>oxide (dust)<br>(a)) |            | 10                       |             |                           |             |                           |             | American<br>Conference of<br>Governmental<br>Industrial<br>Hygienists<br>(ACGIH)4, 5 is<br>the<br>documentation<br>source |

The following materials had no OELs on our records

- isobutylene homopolymer:
- 2- butene homopolymer - polybutene:
- ethylene/ propylene/ ethylidenenorbornene terpolymer:
- isoprene/ isobutene copolymer (butyl rubber):

CAS:9003- 27- 4 CAS:9003- 29- 6  
CAS:9003- 29- 6  
CAS:25038- 36- 2  
CAS:9010- 85- 9

### EMERGENCY EXPOSURE LIMITS

| Material           | Revised IDLH Value (mg/m3) | Revised IDLH Value (ppm) |
|--------------------|----------------------------|--------------------------|
| carbon black 13230 | 1,750                      |                          |
| zinc oxide 22544   | 500                        |                          |

### MATERIAL DATA

ETHYLENE/ PROPYLENE/ ETHYLIDENENORBORNENE TERPOLYMER:  
ZINC OXIDE:

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet

Issue Date: 3-May-2013

A317LP

CHEMWATCH 8044-20

Version No:4.1.1.1

Page 6 of 14

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

2-BUTENE HOMOPOLYMER - POLYBUTENE:

ISOBUTYLENE HOMOPOLYMER:

No exposure limits set by NOHSC or ACGIH.

SEAM TAPE:

None assigned. Refer to individual constituents.

CARBON BLACK:

The TLV-TWA for carbon black is recommended to minimise complaints of excessive dirtiness and applies only to commercially produced carbon blacks or to soots derived from combustion sources containing absorbed polycyclic aromatic hydrocarbons (PAHs). When PAHs are present in carbon black (measured as the cyclohexane-extractable fraction) NIOSH has established a REL-TWA of 0.1 mg/m<sup>3</sup> and considers the material to be an occupational carcinogen.

The NIOSH REL-TWA was "selected on the basis of professional judgement rather than on data delineating safe from unsafe concentrations of PAHs".

This limit was justified on the basis of feasibility of measurement and not on a demonstration of its safety.

ISOPRENE/ ISOBUTENE COPOLYMER (BUTYL RUBBER):

for isoprene:

Russian OEL STEL: 40 mg/m<sup>3</sup>

CEL TWA: 50 ppm, 139 mg/m<sup>3</sup> (compare WEEL TWA)

(CEL = Chemwatch Exposure Limit)

Saturated vapour concentration: 724000 ppm at 25 C.

Odour Threshold Value: 0.005 ppm

The workplace environmental exposure level (WEEL) established by the AIHA is thought to be protective against respiratory tract irritation and against potential subacute and subchronic effects reported in several studies.

TLV TWA: 0.001 mg/m<sup>3</sup> (as total proteins) Inhalable fraction skin sensitiser as rubber processing fume:

MEL-TWA: 0.6 mg/m<sup>3</sup> as cyclohexane solubles [HSE, UK]

BRMA-TWA: 0.25 mg/m<sup>3</sup> as cyclohexane solubles [BRMA Code of Practice]

Rubber fume is a complex and indeterminate mixture of substances and is defined as "fume evolved in the mixing, milling and blending of natural rubber and synthetic polymers combined with chemicals, and in the processes which convert the resultant blend into finished products or parts thereof, and including any inspection procedures where fume continues to be evolved".

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 7 of 14

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

"Fume" generally describes solid particles generated by chemical reactions, or by condensation from the gaseous state, usually after volatilisation from melted substances, and often accompanied by a chemical reaction such as oxidation or thermal breakdown.

Several chemical agents may occur in rubber fume which are experimental or animal carcinogens, however, given the number of chemicals used or formed during rubber making, difficulties arise in attributing a particular effect to a given exposure.

Stomach cancer has been associated with work in jobs early in the production line; lung and lower oesophagus cancer with all work processes; and lymphomas with jobs where co-exposure to solvents occurs. Other cancers have also been reported with liver tumours appearing as a secondary phenomenon. No no-effect levels have been determined.

Two studies showed no excess of bladder cancer in workers entering the industry after 1950: the excess risk before that date is thought to result from exposure to residual beta-naphthylamines previously used as anti-oxidants.

as rubber process dust:

MEL-TWA: 6 mg/m<sup>3</sup> [HSE, UK]

Rubber process dust is a complex, variable mixture of particulates defined as "dust arising in the stages of rubber manufacture where ingredients are handled, weighed, added to or mixed with natural or synthetic elastomers. It does not include dusts arising from the abrasion of cured rubber but occurs during the preparation of compounds of either synthetic or natural rubber.

There is some evidence that occupational exposure to rubber dusts produces an excess incidence of stomach cancer. HSE data concluded that there was a small but significant excess of stomach cancer associated with the initial processes in rubber manufacture. Stomach cancer shows a marked social class gradient, which may lead to an over-estimation of the risk.

One report from the USA stated that exposure in rubber processing areas produces pulmonary disease but this has not been supported by UK epidemiology nor reports from the industry.

No no-effect level has been determined. The MEL was considered appropriate because it was felt reasonably practical for industry to comply with this value.

### ZINC OXIDE:

It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

for zinc oxide:

Zinc oxide intoxication (intoxication zincale) is characterised by general depression, shivering, headache, thirst, colic and diarrhoea.

Exposure to the fume may produce metal fume fever characterised by chills, muscular pain, nausea and vomiting. Short-term studies with guinea pigs show pulmonary function changes and morphologic evidence of small airway inflammation. A no-observed-adverse-effect level (NOAEL) in guinea pigs was 2.7 mg/m<sup>3</sup> zinc oxide. Based on present data, the current TLV-TWA may be inadequate to protect exposed workers although known physiological differences in the guinea pig make it more susceptible to functional impairment of the airways than humans.

The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e. generally less than 5 µm.

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 8 of 14

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### PERSONAL PROTECTION



#### EYE

- No special equipment for minor exposure i.e. when handling small quantities.
- OTHERWISE:
  - Safety glasses with side shields.
  - Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

#### HANDS/FEET

- No special equipment needed when handling small quantities.
- OTHERWISE: Wear chemical protective gloves, e.g. PVC.

#### OTHER

- No special equipment needed when handling small quantities.
- OTHERWISE:
  - Overalls.
  - Barrier cream.
  - Eyewash unit.

#### RESPIRATOR

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

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

### 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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

continued...



# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 9 of 14

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Black tacky solid with no odour. Insoluble in water.

### PHYSICAL PROPERTIES

Does not mix with water.

Floats on water.

|                           |                 |                                 |                 |
|---------------------------|-----------------|---------------------------------|-----------------|
| State                     | Manufactured    | Molecular Weight                | Not applicable. |
| Melting Range (°C)        | Not available   | Viscosity                       | Not available   |
| Boiling Range (°C)        | Not applicable. | Solubility in water (g/L)       | Insoluble.      |
| Flash Point (°C)          | Not applicable  | pH (1% solution)                | Not applicable. |
| Decomposition Temp (°C)   | Not available.  | pH (as supplied)                | Not applicable  |
| Autoignition Temp (°C)    | Not available   | Vapour Pressure (kPa)           | Not applicable  |
| Upper Explosive Limit (%) | Not applicable  | Specific Gravity (water=1)      | 0.97            |
| Lower Explosive Limit (%) | Not applicable  | Relative Vapour Density (air=1) | Not applicable  |
| Volatile Component (%vol) | <1              | Evaporation Rate                | Not applicable  |

## Section 10 - STABILITY AND REACTIVITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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

## Section 11 - TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- The material is discomforting to the gastro-intestinal tract.
- Not normally a hazard due to physical form of product.

##### EYE

- Not normally a hazard due to physical form of product.

continued...

# Seam Tape

Hazard Alert Code: MODERATE

## Chemwatch Material Safety Data Sheet

Issue Date: 3-May-2013

A317LP

CHEMWATCH 8044-20

Version No:4.1.1.1

Page 10 of 14

## Section 11 - TOXICOLOGICAL INFORMATION

### SKIN

- The material is moderately discomforting to the skin and is capable of causing skin reactions which may lead to dermatitis from repeated exposures over long periods.

### INHALED

- Not normally a hazard due to physical form of product.

### CHRONIC HEALTH EFFECTS

- Primary route of exposure is usually by skin contact with the material. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

### TOXICITY AND IRRITATION

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

ETHYLENE/ PROPYLENE/ ETHYLIDENENORBORNENE TERPOLYMER:

CARBON BLACK:

ISOPRENE/ ISOBUTENE COPOLYMER (BUTYL RUBBER):

ISOBUTYLENE HOMOPOLYMER:

- No significant acute toxicological data identified in literature search.

SEAM TAPE:

- Not available. Refer to individual constituents.

2-BUTENE HOMOPOLYMER - POLYBUTENE:

Nil reported

Inhalation (rat) TCLo: 700 mg/m<sup>3</sup>/7H/2W-I

CARBON BLACK:

TOXICITY

Inhalation (rat) TCLo:7 mg/m<sup>3</sup>

Dermal (rabbit) LD50:>3000 mg/kg

- WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

Inhalation (rat) TCLo: 50 mg/m<sup>3</sup>/6h/90D-I Nil reported

IRRITATION

ZINC OXIDE:

TOXICITY

Oral (human) LDLo:500 mg/kg

Inhalation (human) TCLo:600 mg/m<sup>3</sup>

Oral (mouse) LD50:7950 mg/kg

Oral (Rat) LD50:>8437 mg/kg

- 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.

IRRITATION

Skin (rabbit) :500 mg/24 h- Mild

Eye (rabbit) :500 mg/24 h - Mild

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 11 of 14

## Section 11 - TOXICOLOGICAL INFORMATION

### CARCINOGEN

|              |   |       |    |                                 |
|--------------|---|-------|----|---------------------------------|
| carbon black | International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs | Group | 2B | Possibly carcinogenic to humans |
|--------------|---|-------|----|---------------------------------|

### SKIN

|                                    |  |                               |     |
|------------------------------------|--|-------------------------------|-----|
| isobutylene homopolymer            | GESAMP/EHS Composite List - GESAMP Hazard Profiles | D1: skin irritation/corrosion | (0) |
| isobutylene homopolymer            | GESAMP/EHS Composite List - GESAMP Hazard Profiles | D1: skin irritation/corrosion | 0   |
| 2- butene homopolymer - polybutene | GESAMP/EHS Composite List - GESAMP Hazard Profiles | D1: skin irritation/corrosion | (0) |
| 2- butene homopolymer - polybutene | GESAMP/EHS Composite List - GESAMP Hazard Profiles | D1: skin irritation/corrosion | 0   |

## Section 12 - ECOLOGICAL INFORMATION

ZINC OXIDE:

CARBON BLACK:

DO NOT discharge into sewer or waterways.

ZINC OXIDE:

Marine Pollutant

Yes

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Metal:

Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air.

Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms. Environmental processes may enhance bioavailability and may also be important in changing solubilities.

Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/or surface water ecosystems when soaked by rain or melt ice. A metal ion is considered infinitely persistent because it cannot degrade further. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms. Ionic species may bind to dissolved ligands or sorb to solid particles in water.

Ecotoxicity: Even though many metals show few toxic effects at physiological pH levels, transformation may introduce new or magnified effects.

For Zinc and its Compounds: BCF: 4 to 24,000.

Environmental Fate: Zinc is capable of forming complexes with a variety of organic and inorganic groups and is an essential nutrient present in all organisms.

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 12 of 14

## Section 12 - ECOLOGICAL INFORMATION

**Atmospheric Fate:** Zinc concentrations in the air are relatively low, except near industrial sources, such as smelters. There is no estimate for the atmospheric lifetime of zinc, but, since zinc is transported long distances in air, its lifetime in air is at least on the order of days. Zinc is removed from the air by dry/wet deposition.

**Terrestrial Fate:** Soil – Zinc may magnify in the soil if concentrations of the substance exceed 1632 ppm. The relative mobility of zinc in soil is determined by the same factors that affect its transport in aquatic systems, (i.e. solubility of the compound, pH, and salinity). The mobility of zinc in soil increases at lower soil pH, under oxidizing conditions, and at lower cation, (positive ion), exchange capacities. However, the amount of zinc in solution generally increases @ pH >7, in soils high in organic matter. Clay and metal oxides sorb zinc and tend to retard its mobility in soil. Zinc is more mobile at pH 4 than at pH 6.5 as a consequence of sorption. Under low oxygen conditions, zinc sulfide is the controlling species, which has low mobility. Plants - Zinc is not expected to concentrate in plants, however, this depends on plant species, soil pH, and soil composition.

**Aquatic Fate:** Zinc readily adsorbs to sediment and suspended particles. The substance can persist in water indefinitely and can be toxic to aquatic life. Hydrous iron, manganese oxides, clay minerals, and organic material may help remove zinc from sediment since they adsorb the substance. Environmental toxicity of zinc in water is dependent upon the concentration of other minerals and the pH of the solution. Zinc remains as the free ion at lower pH levels. At high pH levels, zinc in solution is precipitated as zinc hydroxide, zinc carbonate, or calcium zincate.

**Ecotoxicity:** Zinc concentrates moderately in aquatic organisms; concentration is higher in crustaceans and bivalve species than in fish. Zinc is not expected to magnify as it moves up the land-based food chain. Zinc can concentrate over 200,000 times in oysters. Copper can increase toxicity to fish and calcium can decrease toxicity. Zinc can accumulate in freshwater species at 5 -1,130 times the concentration present in the water. Crustaceans and fish accumulate zinc from water and food. The substance has been found in very high concentration in aquatic invertebrates. Sediment dwelling organisms have higher zinc concentrations than those living in the aqueous layer. Overexposures to zinc also have been associated with toxic effects in mammals, including man. Ingestion of zinc or zinc-containing compounds has resulted in a variety of effects in the gastrointestinal tract and blood in humans and animals. The substance may cause lesions in the liver, pancreas, and kidneys.

Not readily biodegradable

Daphnia magna LC50 (48 h): 0.98 mg/l

Algae EC50: 0.03 mg/l

### Ecotoxicity

| Ingredient  | Persistence:<br>Water/Soil | Persistence: Air     | Bioaccumulation      | Mobility             |
|---|----------------------------|----------------------|----------------------|----------------------|
| isobutylene homopolymer                                 | LOW                        | No Data<br>Available | LOW                  | HIGH                 |
| 2- butene homopolymer -<br>polybutene                   | No Data<br>Available       | No Data<br>Available | No Data<br>Available | No Data<br>Available |
| ethylene/ propylene/<br>ethylidenenorbornene terpolymer | No Data<br>Available       | No Data<br>Available | No Data<br>Available | No Data<br>Available |
| carbon black  | No Data<br>Available       | No Data<br>Available | No Data<br>Available | No Data<br>Available |
| isoprene/ isobutene copolymer<br>(butyl rubber)         | No Data<br>Available       | No Data<br>Available | No Data<br>Available | No Data<br>Available |
| zinc oxide  | No Data<br>Available       | No Data<br>Available | LOW                  | No Data<br>Available |

continued...

# Seam Tape

Chemwatch Material Safety Data Sheet  
Issue Date: 3-May-2013  
A317LP

Hazard Alert Code: MODERATE

CHEMWATCH 8044-20  
Version No:4.1.1.1  
Page 13 of 14

## Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Recycle containers if possible, or dispose of in an authorised landfill.

## Section 14 - TRANSPORTATION INFORMATION

### HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

### Indications of Danger:

Xn Harmful

### POISONS SCHEDULE

None

### REGULATIONS

#### Regulations for ingredients

#### **isobutylene homopolymer (CAS: 9003-27-4, 9003-29-6) is found on the following regulatory lists;**

"Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "FisherTransport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

#### **2-butene homopolymer - polybutene (CAS: 9003-29-6) is found on the following regulatory lists;**

"Australia Inventory of Chemical Substances (AICS)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

#### **ethylene/ propylene/ ethyldenenorbornene terpolymer (CAS: 25038-36-2) is found on the following regulatory lists;**

"Australia Inventory of Chemical Substances (AICS)", "FisherTransport Information", "Sigma-AldrichTransport Information"

#### **carbon black (CAS: 1333-86-4) is found on the following regulatory lists;**

"Acros Transport Information", "Australia Dangerous Goods Code (ADG Code) - Goods Too Dangerous To Be Transported", "Australia Exposure Standards", "Australia Hazardous Substances", "Australia High Volume

continued...

# Seam Tape

Hazard Alert Code: MODERATE

Chemwatch Material Safety Data Sheet

Issue Date: 3-May-2013

A317LP

CHEMWATCH 8044-20

Version No:4.1.1.1

Page 14 of 14

Section 15 - REGULATORY INFORMATION

Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Numbering System for Food Additives", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

**isoprene/ isobutene copolymer (butyl rubber) (CAS: 9010-85-9) is found on the following regulatory lists;**

"Australia Inventory of Chemical Substances (AICS)"

**zinc oxide (CAS: 1314-13-2, 175449-32-8) is found on the following regulatory lists;**

"Australia Exposure Standards", "Australia FAISD Handbook - First Aid Instructions, Warning Statements, and General Safety Precautions", "Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "Australia Therapeutic Goods Administration (TGA) Sunscreening agents permitted as active ingredients in listed products", "FisherTransport Information", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

**No data for Seam Tape (CW: 8044-20)**

## Section 16 - OTHER INFORMATION

### INGREDIENTS WITH MULTIPLE CAS NUMBERS

| Ingredient Name         | CAS                    |
|-------------------------|------------------------|
| isobutylene homopolymer | 9003-27-4, 9003-29-6   |
| zinc oxide              | 1314-13-2, 175449-32-8 |

■ 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](http://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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*This is the end of the MSDS.*