



Flashing Tape

Ardex Singapore Pte. Ltd

Chemwatch: 8044-16
Version No: 6.1.1.1
Safety Data Sheet

Chemwatch Hazard Alert Code: 1

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S.GHS.SGP.EN

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

Product Identifier

Product name	Flashing Tape
Synonyms	butyl rubber black joining flashing mastic tape
Other means of identification	Not Available

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

Relevant identified uses	Joining and flashing mastic tape.
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Details of the supplier of the safety data sheet

Registered company name	Ardex Singapore Pte. Ltd
Address	26 Tuas Avenue 4 639376 Singapore
Telephone	+65 68 617 700
Fax	+65 68 623 381
Website	Not Available
Email	Not Available

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification	Not Applicable
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Label elements

GHS label elements	Not Applicable
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SIGNAL WORD	NOT APPLICABLE
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Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Continued...

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
		Tape consisting of
9003-27-4	N/S	<u>isobutylene homopolymer</u>
9003-29-6	N/S	<u>2-butene homopolymer - polybutene</u>
25038-36-2	N/S	<u>ethylene/propylene/ethylidenenorbornene terpolymer</u>
1333-86-4	N/S	<u>carbon black</u>
9010-85-9	N/S	<u>isoprene/ isobutene copolymer (butyl rubber)</u>
	N/S	additives, unregulated
		on a
		polyethylene backing with release surface layer

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	Not normally a hazard due to physical form of product.
Skin Contact	If skin or hair contact occurs: <ul style="list-style-type: none"> ▶ 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.
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"> ▶ 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.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

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

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
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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 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.
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) carbon dioxide (CO ₂)

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	Sweep up.
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	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 SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> ▶ 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.
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ Store in a cool, dry, well-ventilated area. ▶ Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container	No restriction on the type of containers. ▶ Check that containers are clearly labelled
Storage incompatibility	<ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents ▶ Avoid strong acids, bases.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Singapore Permissible Exposure Limits of Toxic Substances	carbon black	Carbon black	3.5 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
carbon black	Carbon black	9 mg/m3	99 mg/m3	590 mg/m3

Ingredient	Original IDLH	Revised IDLH
isobutylene homopolymer	Not Available	Not Available
2-butene homopolymer - polybutene	Not Available	Not Available
ethylene/ propylene/ ethylenenorbornene terpolymer	Not Available	Not Available
carbon black	N.E. mg/m3 / N.E. ppm	1,750 mg/m3
isoprene/ isobutene copolymer (butyl rubber)	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	<p>No special equipment for minor exposure i.e. when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ 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 lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below

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Hands/feet protection	No special equipment needed when handling small quantities. OTHERWISE: Wear chemical protective gloves, e.g. PVC.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: <ul style="list-style-type: none"> ▶ Overalls. ▶ Barrier cream. ▶ Eyewash unit.
Thermal hazards	Not Available

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

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 = Sulfox 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)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Slightly black tacky solid in a roll form with polyethylene backing. Insoluble in water.		
Physical state	Manufactured	Relative density (Water = 1)	Not Available
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	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Negligible
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

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	Not normally a hazard due to non-volatile nature of product
Ingestion	Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract

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Skin Contact	Not normally a hazard due to physical form of product.
Eye	Not normally a hazard due to physical form of product.
Chronic	This manufactured article is considered to have low hazard potential if handling and personal protection recommendations are followed

Flashing Tape	TOXICITY	IRRITATION
	Not Available	Not Available
isobutylene homopolymer	dermal (rat) LD50: >2000 mg/kg ^[1]	Not Available
	Oral (rat) LD50: >2000 mg/kg ^[1]	
2-butene homopolymer - polybutene	dermal (rat) LD50: >2000 mg/kg ^[1]	Nil reported
	Oral (rat) LD50: >2000 mg/kg ^[1]	
ethylene/ propylene/ ethyldidenenorbornene terpolymer	Not Available	Not Available
carbon black	Dermal (rabbit) LD50: >3000 mg/kg ^[2]	Not Available
	Oral (rat) LD50: >8000 mg/kg ^[1]	
isoprene/ isobutene copolymer (butyl rubber)	Not Available	Not Available

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

2-BUTENE HOMOPOLYMER - POLYBUTENE	Inhalation (rat) TCLo: 700 mg/m ³ /7H/2W-1
CARBON BLACK	WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. Inhalation (rat) TCLo: 50 mg/m ³ /6h/90D-1 Nil reported
ISOBUTYLENE HOMOPOLYMER & ETHYLENE/ PROPYLENE/ ETHYLIDENENORBORNENE TERPOLYMER & CARBON BLACK & ISOPRENE/ ISOBUTENE COPOLYMER (BUTYL RUBBER)	No significant acute toxicological data identified in literature search.

Acute Toxicity	<input type="radio"/>	Carcinogenicity	<input type="radio"/>
Skin Irritation/Corrosion	<input type="radio"/>	Reproductivity	<input type="radio"/>
Serious Eye Damage/Irritation	<input type="radio"/>	STOT - Single Exposure	<input type="radio"/>
Respiratory or Skin sensitisation	<input type="radio"/>	STOT - Repeated Exposure	<input type="radio"/>
Mutagenicity	<input type="radio"/>	Aspiration Hazard	<input type="radio"/>

Legend: - Data available but does not fill the criteria for classification
 - Data required to make classification available
 - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
isobutylene homopolymer	LC50	96	Fish	6.473mg/L	3
isobutylene homopolymer	EC50	96	Algae or other aquatic plants	17.437mg/L	3
isobutylene homopolymer	EC50	384	Crustacea	1.561mg/L	3
2-butene homopolymer - polybutene	EC50	48	Crustacea	>3.1mg/L	2
2-butene homopolymer - polybutene	EC50	24	Crustacea	>3.1mg/L	2
carbon black	LC50	96	Fish	=1000mg/L	1
carbon black	EC50	24	Crustacea	>5600mg/L	1

carbon black	NOEC	96	Fish	=1000mg/L	1
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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				

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
isobutylene homopolymer	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
isobutylene homopolymer	LOW (LogKOW = 2.2256)

Mobility in soil

Ingredient	Mobility
isobutylene homopolymer	LOW (KOC = 35.04)

SECTION 13 DISPOSAL CONSIDERATIONS**Waste treatment methods**

Product / Packaging disposal	
	<ul style="list-style-type: none"> ▶ 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 TRANSPORT INFORMATION**Labels Required**

Marine Pollutant	
	NO

Land transport (UN): 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**

ISOBUTYLENE HOMOPOLYMER(9003-27-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

2-BUTENE HOMOPOLYMER - POLYBUTENE(9003-29-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

ETHYLENE/ PROPYLENE/ ETHYLIDENENORBORNENE TERPOLYMER(25038-36-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

CARBON BLACK(1333-86-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Singapore Permissible Exposure Limits of Toxic Substances

ISOPRENE/ ISOBUTENE COPOLYMER (BUTYL RUBBER)(9010-85-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (ethylene/ propylene/ ethylideneborbornene terpolymer; isobutylene homopolymer; isoprene/ isobutene copolymer (butyl rubber); carbon black; 2-butene homopolymer - polybutene)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	N (ethylene/ propylene/ ethylideneborbornene terpolymer; isoprene/ isobutene copolymer (butyl rubber))
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y

Philippines - PICCS	Y
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
isobutylene homopolymer	9003-27-4, 9003-29-6

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

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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