Hi-Tuff TPO Bonding Adhesive
Safety Data Sheet

Date: May 2019

SECTION 1 – CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product:

Product Name:	Hi-Tuff TPO Bonding Adhesive
Other Names:	N/A
Product Code:	EBBATPO
HSNO Approval:	HSR00269
Approval Description:	Surface Coatings and Colorants
UN Number:	UN1133
Proper Shipping Name:	ADHESIVE
DG Class:	3
Packing Group:	II
Hazchem Code:	3YE
Uses:	Contact Adhesive

Company Details:

Company:	Sealco Limited
Address:	31 Newtown St, Bromley, Christchurch PO Box 35-190, Shirley, Christchurch
Telephone:	03 366 9495, 0508 292 837
Website:	www.sealco.co.nz

Emergency Number:

National Poisons Centre
0800 764 766

SECTION 2 – HAZARDS IDENTIFICATION

Approval:

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR00269, Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2017). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

Classes:	Hazard Statements:
3.1B	**H225 -** Highly flammable liquid & vapour
6.1E (Aspiration)	**H304 -** May be fatal if swallowed and enters airways
6.1D (Oral)	**H302 -** Harmful if swallowed
6.3A	**H315 -** Causes skin irritation
6.4A	**H320 -** Causes eye irritation
6.5B	**H317 -** May cause an allergic skin reaction
6.7B	**H341 -** Suspected of causing cancer

6.8B	**H361 -** Suspected of damaging fertility or unborn child
6.9B	**H373 -** May cause damage to organs through prolonged or repeated exposure
6.9B (Narcotic)	**H336 -** May cause drowsiness or dizziness
9.1B	**H411 -** Toxic to aquatic life with long lasting effects
9.3C	**H433 -** Toxic to terrestrial vertebrates

DANGER Symbols

Other Classifications:
There are no other classifications that are known to apply

Precautionary Statements:
P102 – Keep out of reach of children
P103 – Read label before use
P201 - Obtain special instructions before use
P202 – Do not use until all safety instructions have been read and understood
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 – Keep container tightly closed
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 – Wash hands thoroughly after handling
P270 – Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 – Avoid release to the environment
P280 – Wear protective gloves / eye protection / face protection
P301+P310 – If SWALLOWED. Immediately call a POISIN CENTRE or doctor
P331 – Do NOT induce vomiting
P330 – Rinse mouth
P308+P313 - IF exposed or concerned: Get medical advice/ attention
P370+P378 - In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313+P337 – If eye irritation persists seek medical advice / attention
P304+P312 - IF INHALED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local regulations.

SECTION 3 – INFORMATION ON INGREDIENTS

CAS / Identification	Component	Conc (%)
9010-08-4	Polychloroprene	7-13
Trade Secret	Styrene butadiene polymer	0.5-1.5
Trade Secret	Chlorinated polypropylene	0.1-1
Trade Secret	Polyphenol antioxidant	0.1-1
1309-48-4	Magnesium oxide	0.1-1
1314-13-2	Zinc oxide	0.1-1
Trade Secret	Heat reactive phenolic resin	1-5
108-88-3	Toluene	15-40
64742-89-8	Solvent naphtha, petroleum, light aliphatic	10-30
67-64-1	Acetone	5-10
1330-20-7	Xylene	0.5-1.5
100-41-4	Ethylbenzene	0.1-1

This is a commercial product whose exact ratios of components may vary. Trace quantities of impurities are also likely.

SECTION 4 – FIRST AID MEASURES

Description of Necessary Measures:
If exposed or concerned: Call a POISON CENTER or doctor/physician

Inhalation:
Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
Skin:
Remove contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs, seek medical advice/attention.
Eyes:
Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Ingestion:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed:
Treat symptomatically and supportively.

Most Important Symptoms/Effects:
Acute May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys, liver, and respiratory system. May cause drowsiness or dizziness.

Delayed:
Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: central nervous system, respiratory system, blood, liver.

Note to Physicians:
Contains: toluene, heptane.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media:

Suitable Extinguishing:
Media Dry chemical, foam or carbon dioxide. Water may be ineffective
Unsuitable Extinguishing Media:
Do not use high-pressure water streams

Special Hazards Arising from the Chemical:
Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback
Hazardous Combustion Products:
Oxides of carbon, oxides of nitrogen
Advice for firefighters:
Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.
Fire Fighting Measures:
Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up:
Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other noncombustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

Environmental Precautions:
Avoid release to the environment.

SECTION 7 – HANDLING & STORAGE

Precautions for Safe Handling:
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Vapors will travel. Prevent vapors from entering buildings through open windows or ventilation systems. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities:
Store in a well-ventilated place. Keep container tightly closed Keep cool. Store locked up .Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

Incompatible Materials:
Acids, bases, strong oxidizing agents

SECTION 8 – EXPOSURE CONTROL & PERSONAL PROTECTION

Workplace Exposure Standards:
A workplace exposure standard has not been established by Worksafe NZ for this product. There is a general limit of 10mg/m³ for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Standards

Ingredient	WES-TWA	WES-STEL
Solvent naptha (petroleum) Light Allphatic	Data unavailable	Data unavailable
Magnesium oxide	10mg/m³ (fume)	Data unavailable
Zinc oxide	5mg/m³ (fume)	Data unavailable
Toluene	50ppm, 188mg/m³ (skin)	Data unavailable
Acetone	500ppm, 1185mg/m³	1000ppm, 2375mg/m³
Xylene	50ppm, 217mg/m³	Data unavailable
Ethylbenzene	100ppm, 434mg/m³	Data unavailable

*These workplace exposure standards are also Prescribed Exposure Standards (PES) under the Health & Safety at Work (General Risk and Workplace Management) Regulations 2016.

Engineering Controls:

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far as below the WES as practicable. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at their source, or other methods. If you believe air borne concentrations of mist, dust or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment:



Eyes: Wear chemical safety goggles with a face shield to protect against skin and eye contact when appropriate.

Skin Protection: Wear work clothes with long sleeves. Wear protective shoes. Wear appropriate chemical resistant gloves.

Respiratory Protection: An approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance	yellowish liquid	**Physical State**	Liquid
Odour	hydrocarbon	**Colour**	Yellowish
Odour Threshold	Not available	**pH**	Not available
Melting Point	-95 - -47 °C (-139--53 °F)	**Boiling Point**	56 - 137 °C (133-279 °F)
Freezing Point	Not available	**Evaporation Rate**	3.2
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not available
Auto-ignition	230 °C (475 °F)	**Flash Point**	-20 °C (-4 °F)
Lower Explosive Limit	1%	**Decomposition**	Not available
Upper Explosive Limit	12.8%	**Vapor Pressure**	54.1 mmHg
Vapor Density (air=1)	3.2	**Specific Gravity (water=1)**	Not available
Water Solubility	Negligible	**Partition coefficient: noctanol/water**	Not available
Viscosity	2500 cps	**Solubility (Other)**	Hydrocarbons
Density	0.849 (relative)	**VOC**	670 g/L

SECTION 10 – STABILITY & REACTIVITY

Reactivity	No reactivity hazard is expected
Chemical Stability	Stable under normal conditions of use.
Possibility of Hazardous Reactions	Hazardous polymerization will not occur
Conditions to Avoid	Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.
Incompatible Materials	Acids, bases, strong oxidizing agents
Hazardous decomposition products	Oxides of carbon, oxides of nitrogen

SECTION 11 – TOXICOLOGICAL INFORMATION

Inhalation	May cause drowsiness or dizziness. May cause respiratory irritation.
Skin Contact	Causes skin irritation. May cause allergic skin reaction.
Eye Contact	Causes serious eye irritation
Ingestion	May be fatal if swallowed and enters airways. May cause gastrointestinal irritation.
Immediate Effects	May be fatal if swallowed and enters airways. Cause skin irritation. Causes serious

	eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys, liver, and respiratory system. May cause drowsiness or dizziness.
Delayed Effects	Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: central nervous system, respiratory system, blood, liver.
Irritation/Corrosivity Data	Causes skin irritation. Causes serious eye irritation.
Respiratory Sensitization	No data available.
Dermal Sensitization	May cause allergic skin reaction.

Acute and Chronic Toxicity Component Analysis - LD50/LC50:
The components of this material have been reviewed in various sources and the following selected endpoints are published:

Polychloroprene (Mixture)	Oral LD50 Rat 20000 mg/kg
Styrene butadiene polymer (Mixture)	Oral LD50 Rat 6450 mg/kg
Chlorinated polypropylene (Mixture)	Oral LD50 Rat 5000 mg/kg
Polyphenol antioxidant (Trade Secret)	Oral LD50 Rat >5000 mg/kg Dermal LD50 Rabbit >5000 mg/kg Inhalation LC50 Rat >165 mg/L 1 h
Magnesium oxide (1309-48-4)	Oral LD50 Rat >5000 mg/kg
Zinc oxide (1314-13-2)	Oral LD50 Rat >15000 mg/kg Inhalation LC50 Rat >5.7 mg/L
Toluene (108-88-3)	Oral LD50 Rat >7000 mg/kg Dermal LD50 Rabbit 12 - 14 g/kg Inhalation LC50 Rat 30 - 35 mg/L
Solvent naphtha, petroleum, light aliphatic (64742-89-8)	Oral LD50 Rat >2000 mg/kg Dermal LD50 Rat >2000 mg/kg Inhalation LC50 Rat >5000 ppm 1 hr
Acetone (67-64-1)	Oral LD50 Rat 5800 mg/kg Dermal LD50 Guinea pig >7246 mg/kg Inhalation LC50 Rat 32000 ppm 4 h
Xylene (1330-20-7)	Oral LD50 Rat 4300 mg/kg Dermal LD50 Rabbit >2000 mg/kg Inhalation LC50 Rat 29.08 mg/L 4 h
Ethylbenzene (100-41-4)	Oral LD50 Rat 3500 mg/kg Dermal LD50 Rabbit 15400 mg/kg Inhalation LC50 Rat 4000 ppm 4 hr

Component Carcinogenicity

Polychloroprene	Mixture
IARC:	Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Magnesium oxide	1309-48-4
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Xylene	1330-20-7
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Ethylbenzene	100-41-4
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present

Germ Cell Mutagenicity	No data available.
Reproductive Toxicity	May damage fertility or the unborn child.
Specific Target Organ Toxicity - Single Exposure	central nervous system, liver, respiratory system, kidneys
Specific Target Organ Toxicity - Repeated Exposure	central nervous system, liver, respiratory system, blood
Aspiration hazard	May be fatal if swallowed and enters airways.
Medical Conditions Aggravated by Exposure	May cause allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis.
Additional Data	No additional information available

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Avoid release to the environment

Component Analysis - Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID

Invertebrate	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Toluene	108-88-3
Fish	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Acetone	67-64-1
Fish	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
Xylene	1330-20-7
Fish	LC50 96 h Pimephales promelas 13.4 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L [static]; LC50 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L; LC50 96 h Lepomis macrochirus 13.1 - 16.5 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 19 mg/L; LC50 96 h Lepomis macrochirus 7.711 - 9.591 mg/L [static]; LC50 96 h Pimephales promelas 23.53 - 29.97 mg/L [static]; LC50 96 h Cyprinus carpio 780 mg/L [semi-static]; LC50 96 h Cyprinus carpio >780 mg/L; LC50 96 h Poecilia reticulate 30.26 - 40.75 mg/L [static]
Invertebrate	EC50 48 h water flea 3.82 mg/L; LC50 48 h Gammarus lacustris 0.6 mg/L

Ethylbenzene	100-41-4
Fish	LC50 96 h Oncorhynchus mykiss 11 - 18 mg/L [static]; LC50 96 h Oncorhynchus mykiss 4.2 mg/L [semi-static]; LC50 96 h Pimephales promelas 7.55 - 11 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 32 mg/L [static]; LC50 96 h Pimephales promelas 9.1 - 15.6 mg/L [static]; LC50 96 h Poecilia reticulata 9.6 mg/L [static]
Algae	EC50 72 h Pseudokirchneriella subcapitata 4.6 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata >438 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 2.6 - 11.3 mg/L [static] EPA; EC50 96 h Pseudokirchneriella subcapitata 1.7 - 7.6 mg/L [static] EPA
Invertebrate	EC50 48 h Daphnia magna 1.8 - 2.4 mg/L IUCLID

Persistence and Degradability - No information available for the product.
Bio-accumulative Potential - No information available for the product.
Mobility - No information available for the product.
Other Toxicity - No additional information available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal Methods:
Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14 – TRANSPORT INFORMATION

Land Transport Rule: Hazardous Goods 2005 – NZS 5433:2007
Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

Shipping Name:	Adhesives
UN #	UN1133
Hazard Class:	3
Packing Group:	II
HAZCHEM Code	3YE
Precautions:	Flammable Liquid

SECTION 15 – REGULATORY INFORMATION

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR00269, Surface Coatings and Colorants (Flammable, Toxic [6.7]) Group Standard 2017).

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key Workplace requirement are:

SDS	To be available in 10 minutes any workplace storing any quantity
Inventory	An inventory of all hazardous substances must be prepared and maintained
Packaging	All hazardous substances should be appropriately packaged, including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017
Emergency Plan	Required if > 1000 litres is stored
Certified Handler	Not required
Tracking	Not required
Bunding & Secondary Containment	Required if > 1000 litres is stored
Signage	Required if > 250 litres is stored in one location
Location Compliance Certificate	Required if > 100L (containers > 5L), 250 litres (≤5L containers) 50L (in use) is stored in any one location
Flammable Zone	Must be established if > 100L (closed containers), 25L (decanting), 5L (open occasionally), 1L (in use) is stored in any one location
Fire Extinguisher	If > 250L is present

Section 16 – OTHER INFORMATION

Abbreviations:

CAS Number	Unique Chemical Abstracts Service Registry Number
Controls Matrix	List of default controls linking regulation numbers to Matrix code
EC50	Ecotoxic Concentration 50% - concentration in water which is fatal to 50% of a test population (eg. Daphnia, fish species)
EPA	Environmental Protection Authority
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially firefighters

HSNO	Hazardous Substances and New Organisms (Act & Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD50	Lethal Dose 50% - dose which is fatal to 50% of a test population (usually rats)
LC50	Lethal Concentration 50% - concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (Safety Data Sheet)
NZIoC	New Zealand Inventory of Chemicals
PES	Prescribes Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO
STEL	Short Term Exposure Limit – The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15-minute period, provided the TWA is not exceeded.
TWA	Time Weighted Average – generally referred to WES averaged over typical workday (usually 8 hours)
UEL	Upper Explosive Limit
WES	Workplace Exposure Standard – The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours per day, 5 days per week) The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the workers breathing zone

Disclaimer:

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