SAFETY DATASHEET

Code	Description	Size	Colour
60060	Toptec Expanding Foam Click & Fix	750 ml	Champagne

Recommended use: 20073		Sealant
HSNO group standard:		HSR002515
UN number, shipping name and packaging600 group:		1950, Aerosols
Supplier contact details:	Soudal Ltd	Freephone: 0800 TOPTEC
	14 Avalon Drive	Phone: (07) 847 5540
	Nawton	Fax: (07) 847 0324
	Hamilton 3200	Email: sales@toptec.co.nz
	New Zealand	Website: www.toptec.co.nz
NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111		

2. Hazards Identification

2.1 Hazardous Substances and New Organisms (HSNO) classification:

Classification		Hazard statements	
Flammable aerosol Category 1	**2.1.2A**	H222.	Extremely flammable aerosol
Acute inhalation toxicity Category 4	**6.1D**	H332.	Harmful if inhaled
Skin effects Category 2	**6.3A**	H315.	Causes skin irritation
Eye effects Category 2	**6.4A**	H319.	Causes serious eye irritation
Respiratory sensitisation Category 1	**6.5A**	H334.	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sensitisation Category 1	**6.5B**	H317.	May cause an allergic skin reaction
Reproductive toxicity Category 3 **6.8C**		H362.	May cause harm to breast fed children
STOT-SE Category 1	**6.9A**	H370.	Causes damage to organs through inhalation
STOT-RE Category 1	**6.9A**	H372.	Causes damage to organs through prolonged or repeated inhalation
Respiratory effects Category 3	**6.9**	H335.	May cause respiratory irritation
Chronic Aquatic Effects Category 4	**9.1D**	H413.	May cause long lasting harmful effects to aquatic life

2.2 Symbols:

2.3 Signal Word:

DANGER

2.4 Precautionary Statements:

P103 Read label before use
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No Smoking
P211 Do not spray on an open flame or other ignition source
P281 Avoid breathing fumes
P271 Use only outdoors or in a well-ventilated area
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection
P285 In case of inadequate ventilation wear respiratory protection
P273 Avoid release to the environment
P272 Contaminated work clothing should not be allowed out of the workplace
P270 Do not eat, drink or smoke while using this product
P263 Avoid contact during pregnancy/while nursing

3. Composition/Information on Ingredients

3.1 Information on the ingredients used in the substance:

Ingredient	CAS No.	Individual HSNO classification	Concentration (%)
Polymethylenepolyphenyl isocyanate	9016-87-9	Acute oral toxicity Category 5; Acute Inhalation toxicity Category 2; Skin Effects Category 2; Eye Effects Category 2; Respiratory Sensitisation Category 1; Skin Sensitisation Category 1; STOT- RE Category 1; STOT-SE Category 1	10 – 40
Alkanes, C14-17 chloro	85535-85-9	Lactation Effects; Acute Aquatic Effects Category 1; Chronic Aquatic Category 1	1 – 20
Propane	74-98-6	Flammable Gas Category 1	1 – 10
Isobutane	75-28-5	Flammable Gas Category 1	1 – 10
Dimethyl ether	115-10-6	Flammable Gas Category 1; Eye Effects Category 2	1 – 15
Ingredients not classified as hazardous		Non hazardous	balance
Methyltrimethyloxysilane	1185-55-3	Flammable Liquid Category 2; Skin Effects Category 3; Eye Effects Category 2	< 1
Bis(neodecanoyl)dioctylstannane	68299-15-0	Acute Oral Toxicity Category 5; Acute Dermal Toxicity Category 5; Acute Inhalation Toxicity Category 5; Skin Effects Category 1B; Eye Effects Category 1; Chronic Aquatic Effects Category 3	< 1

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

4. First Aid Measures

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

4.1 Eye Contact

Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

4.2 Skin or hair contact:

Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents.
Seek medical attention in the event of irritation.

4.3 Inhalation:

Remove to fresh air. 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. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.

4.4 Ingestion:

Not considered a normal route of entry.

4.5 General advice and advice for physicians:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 764766 from anywhere in New Zealand (13 1126 in Australia) and is available at all times. Have this SDS or product label with you when you call.
Treat symptomatically.
For sub-chronic and chronic exposures to isocyanates:
This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity. Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts. Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure. Pulmonary symptoms include cough, burning, substernal pain and dyspnoea. Some cross-sensitivity occurs between different isocyanates. Noncardiogenic pulmonary oedema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilator support and an intravenous line.
Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids. Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion. Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions. There is no effective therapy for sensitised workers.
[Ellenhorn and Barceloux; Medical Toxicology]

NOTE: Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity.
[Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]
Personnel who work with isocyanates, isocyanate prepolymers or polyisocyanates should have a pre-placement medical examination and periodic examinations thereafter, including a pulmonary function test. Anyone with a medical history of chronic respiratory disease, asthmatic or bronchial attacks, indications of allergic responses, recurrent eczema or sensitisation conditions of the skin should not handle or work with isocyanates. Anyone who develops chronic respiratory distress when working with isocyanates should be removed from exposure and examined by a physician. Further exposure must be avoided if a sensitivity to isocyanates or polyisocyanates has developed.
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5. Fire-Fighting Measures

5.1 Extinguishing media:

Water spray or fog; dry chemical or CO2

5.2 Special hazards due to combustion:

Combustible. Moderate fire hazard when exposed to heat or flame. When heated to high temperatures decomposes rapidly generating vapour which pressures and may then rupture containers with release of

flammable and highly toxic isocyanate vapour. Burns with acrid black smoke and poisonous fumes. Containers may explode when heated - Ruptured cylinders may rocket May burn but does not ignite easily. Fire exposed cylinders may vent contents through pressure relief devices thereby increasing vapour concentration. Fire may produce irritating, poisonous or corrosive gases. Runoff may create fire or explosion hazard. May decompose explosively when heated or involved in fire. Contact with gas may cause burns, severe injury and/ or frostbite. POISONOUS: MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN

5.3 Advice for fire-fighters:

Slight hazard when exposed to heat, flames and oxidisers. Take account of environmentally hazardous fire-fighting water.
Excessive pressures may develop in a gas cylinder exposed in a fire, this may result in an explosion

6. Accidental Release Measures

6.1 Personal precautions:

Clear are of personnel and move upwind, avoid breathing vapour. Wear protective clothing. Impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation. Wipe up.

6.2 Environmental precautions:

Use appropriate containment to avoid environmental contamination.

6.3 Methods for cleaning up:

Absorb and decontaminate. - Completely cover the spill with wet sand, wet earth, vermiculite or other similar absorbent. - Add neutraliser (for suitable
formulations: see below) to the adsorbent materials (equal to that of estimated spill pool volume). Intensify contact between spill, absorbent and neutraliser by carefully mixing with a rake and allow to react for 15 minutes Shovel absorbent/decontaminant solution mixture into a steel drum.
Decontaminate surface. - Pour an equal amount of neutraliser solution over contaminated surface. - Scrub area with a stiff bristle brush, using moderate
pressure. - Completely cover decontaminant with vermiculite or other similar absorbent. - After 5 minutes, shovel absorbent/decontamination solution mixture into the same steel drum used above. Monitor for residual isocyanate. If surface is decontaminated, proceed to next step. If contamination persists, repeat decontaminate procedure immediately above. Place loosely covered drum (release of carbon dioxide) outside for at least 72 hours. Label waste-containing drum appropriately. Remove waste materials for incineration. Decontaminate and remove personal protective equipment. Return to normal operation. Conduct accident investigation and consider measures to prevent reoccurrence.

6.4 Disposal:

Collect treated spillage. Contact local and regional authorities for further directions.

7. Handling and Storage

7.1 Handling:

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources.
Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. DO NOT incinerate or puncture aerosol cans. DO NOT spray directly on humans, exposed food or food utensils. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

7.2 Storage:

Aerosol dispenser. Check that containers are clearly labelled.

8. Exposure Controls/Personal Protection

8.1 Exposure limits:

CAS no.	Substance or ingredient	WES-TWA	WES-STEL
9016-87-9	Polymeric diphenylmethane diisocyanate	0.02 mg/m3 as -NCO	0.07 mg/m3 as -NCO
	Dimethyl ether	766 mg/m3 400 ppm	958 mg/m3 500 ppm

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

8.2 Engineering Controls:

This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.
Eyewash unit

8.3 Exposure controls:

Control	Protective measure
Eye	Wear safety glasses with side shield or chemical goggles [AS 2919] 
Respiratory	Type GAX-P organic respirator of sufficient capacity is recommended 
Skin	Butyl or neoprene gloves are recommended if skin contact or contamination of clothing is likely, protective clothing should be worn. [AS 2161] Wear protective clothing. 

9. Physical and Chemical Properties

9.1 General substance properties:

Property	Details
Appearance	Aerosol
Odour	Characteristic
pH	No data.
Vapour pressure	No data.
Viscosity	No data.
Boiling Point	No data.
Volatile materials	No data
Freezing/melting point	No data.
Solubility	No data
Specific gravity/density	0.95 g/ml

Flash point	No Data
Auto-ignition temperature	No Data
Upper and lower flammability limits	No data
Corrosiveness	No data.

10. Stability and Reactivity

10.1 Stability:
Stable under normal conditions.

10.2 Conditions to avoid:
Elevated temperatures. Presence of open flame.

10.3 Incompatible materials to avoid:
Avoid oxidising agents (nitrates, oxidising acids, chlorine bleaches, pool chlorine etc.) as ignition may result

10.4 Hazardous decomposition products:
Decomposition may produce toxic fumes of: carbon monoxide (CO), carbon dioxide (CO2), isocyanates (-NCO), hydrogen cyanide (HCN), and minor amounts of, hydrogen chloride (HCl), phosgene (COCl2) , nitrogen oxides (NOx), phosphorus oxides (POx), other pyrolysis products typical of burning organic material

11. Toxicological Information

11.1 Summary of Toxicity
This product is considered an eye irritant and a skin sensitiser.

11.2 Acute toxicity:

Test	Data and symptoms of exposure
Inhaled	Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of the vapour is hazardous and may even be fatal. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation. Inhalation of toxic gases may cause: Central Nervous System effects including depression, headache, confusion, dizziness, stupor, coma and seizures; respiratory: acute lung swellings, shortness of breath, wheezing, rapid breathing, other symptoms and respiratory arrest; heart: collapse, irregular heartbeats and cardiac arrest; gastrointestinal: irritation, ulcers, nausea and vomiting (may be bloody), and abdominal pain. The vapour/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterised by nausea and vomiting. Pulmonary sensitisation may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses, and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitised persons may lead to possible long term respiratory impairment. Inhalation hazard is increased at higher temperatures. WARNING: Intentional misuse by concentrating/inhaling contents may be lethal. The paraffin gases are practically not harmful at low doses. Higher doses may produce

	reversible brain and nerve depression and irritation. Spray mist may produce discomfort
Oral	Accidental ingestion of the material may be seriously damaging to the health of the individual; animal experiments indicate that ingestion of less than 40 gram may be fatal. Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments
Dermal	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Spray mist may produce discomfort Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material can cause eye irritation and damage in some persons. Not considered to be a risk because of the extreme volatility of the gas.
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Harmful: danger of serious damage to health by prolonged exposure through inhalation. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Principal route of occupational exposure to the gas is by inhalation. Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. [CCTRADE-Bayer, APMF] There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, incoordination, anxiety, depression and paranoia. Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.

12. Ecological Information

12.1 Summary of Ecotoxicity

DO NOT discharge into sewer or waterway

Ecology	**Ecological data**
Aquatic ecotoxicity	No data
Soil ecotoxicity	No data.
Terrestrial vertebrate	No data
Terrestrial invertebrate	No data.
Bioaccumulation	No data
Mobility	No data

Degradability	No data.

13. Disposal Considerations

13.1 Disposal methods:

This product may be disposed of in a landfill provided this product will be kept separated from contact with explosives, oxidisers and ignition sources at all times. This product may be disposed of by burning in an incineration facility. This product may be disposed of by purging. Further details can be provided by local and regional authorities.

13.2 Disposal restrictions:

The product must not be disposed of in a landfill or purged within range of legally located persons and places, where upon ignition, would expose them to more blast pressure and heat radiation that described in regulation 6(3)(b) of the Hazardous Substances (Disposal) Regulations 2001. Burning must be managed to the performance requirements of regulation 6(3)(b) of the Hazardous Substances (Disposal) Regulations 2001. Disposal of this product by landfill, burning or purging must not exceed any relevant exposure limits and/or environmental exposure limits set for the substance or any of its components. Further details can be provided by local and regional authorities.

13.3 Special precautions for disposal:

No data.

14. Transport Information

HAZCHEM **not applicable**

Land Transport UNDG

Class or division	2,1
Subsidiary Risk	None
UN Number	**1950**
UN Packing Group	not applicable
Shipping Name	**Aerosols**
Special Provisions	63 190 277 327 344 381
Limited Quantities	1 L

Air Transport IATA

ICAO/IATA Class	2.1
ICAO/IATA Subrisk	None
UN/ID Number	**1950**
Packing Group	not applicable
ERG Code	10L
Special provision	A145 A167 A802 A1
Cargo only	
Packing instructions	203
Maximum Qty/pack	150 Kg
Passenger and Cargo	
Packing instructions	Forbidden
Maximum Qty/pack	Forbidden
Passenger & Cargo Limited Quantity	
Packing instructions	Forbidden
Maximum Qty/pack	Forbidden
Shipping Name	**Aerosols**

Marine Transport IMDG

IMDG Class	2.1
IMDG Subrisk	None
UN Number	**1950**
UN Packing Group	not applicable
EmS Number	F – D, S – U
Special provisions	63 190 277 327 344 959
Limited quantities	1 L
Marine pollutant	No
Shipping Name	**Aerosols**

15. Regulatory Information

15.1 HSNO approval number and Group Standard:

HSR002515 Aerosols, flammable

15.2 Group Standard conditions and other regulations:

Condition	Requirement
SDS	Safety data sheet must be available to a person handling the substance within 10 minutes.
Emergency plan	Required.
Approved handler	Class 2.1.2A required when quantities exceed 3000L water capacity
Tracking	Not applicable
Bunding and secondary containment	Must be in place for all liquid materials
Signage	Required when quantities exceed 3000L water capacity
Test certificate	Required when quantities exceed 3000Lt water capacity, (either open or closed containers)
Hazardous Atmosphere Zone	Not required
Fire extinguisher	2x required

Polymethylene polyphenyl diisocyanate (CAS 9016-87-9) is found on the following regulatory lists

- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Hazardous Substances & New Organisms (HSNO Act) Classification of Chemicals

Alkanes, C14-17 chloro (CAS 85535-85-9) is found on the following regulatory lists

- New Zealand Inventory of Chemicals (NZIoC)
- International Agency for Research on Cancer (IARC) – Agents classified by the IARC monographs

Propane (CAS74-98-6) is found on the following regulatory lists

- International Air Transport Association (IATA) Dangerous Goods Regulations – Prohibited list Passenger and Cargo Aircraft
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Hazardous Substances and New Organisms (HSNO) Act – Classification of Chemicals
- New Zealand Workplace Exposure Standards (WES)

isobutane (CAS 75-28-5) is found on the following regulatory lists

- International Air Transport Association (IATA) Dangerous Goods Regulations – Prohibited list Passenger and Cargo Aircraft

- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Hazardous Substances and New Organisms (HSNO) Act – Classification of Chemicals

Dimethyle ether (CAS 115-10-6) is found on the following regulatory lists

- International Air Transport Association (IATA) Dangerous Goods Regulations – Prohibited list Passenger and Cargo Aircraft
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Hazardous Substances and New Organisms (HSNO) Act – Classification of Chemicals
- New Zealand Workplace Exposure Standards (WES)

National Inventories

Australia	AICS	Y
Canada	DSL	Y
Canada	NDSL	N
China	IECSC	Y
Europe	EINEC/ELINCS/NLP	N
Japan	ENCS	N
Korea	KECI	Y
New Zealand	NZIoC	Y
Philippines	PICCS	Y
USA	TSCA	N

Y = All ingredients are on the inventory

16. Other Information

16.1 Date of preparation or revision:

March 2017 initial preparation

16.2 Abbreviations:

Abbreviation	Description
CAS number	Number assigned to chemical in the Chemical Abstracts Service registry
HAZCHEM code	Code used by fire-fighters to determine correct method of action in the case of fire
HSNO	Hazardous Substances and New Organisms (Act)
ICAO Technical Instructions	International Civil Aviation Organization Technical Instructions
IMDG code	International Maritime Dangerous Goods code controlled by the International Maritime Organization (IMO)
LC50	Lethal concentration 50% - concentration fatal to 50% of the tested population
LD50	Lethal dose 50% - dose fatal to 50% of the tested population
NZS 5433	New Zealand Standard 5433 (Standard for the Transport of Dangerous Goods on Land)
SDS	Safety data sheet
STEL	Short term exposure limit
TWA	Time weighted average (typically measured as 8 hours)
UN number	United nations number
WES	Workplace exposure standard

16.3 References

Chemical properties and HSNO classifications derived from the New Zealand chemical classification information database (CCID). www.epa.govt.nz Workplace exposure limits derived from Workplace Exposure Standards and Biological Exposure Indices 7th Edition. www.mbie.govt.nz

The information relates only to the specific material designated and may not be valid for such material in combination with any other material or in any process, unless specified in the text.

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