

1. Identification of Substance & Company



Company Details:

Hilti (New Zealand) Ltd
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 Penrose
 Auckland, 1061
 PO Box 112- 030, Penrose
 Ph 09 526 7783 (between 7-30 AM and 6-30 PM)
 EMERGENCY TELEPHONE NUMBER
 0800 623 000 (National Poisons Centre)

Product

Product name	Hilti HY 170
Other names	NA
Product code	HY 170
HSNO approval	Component A: HSR002544, Component B: HSR002629
Approval description	Component A: Construction Products (Subsidiary Hazard) Group Standard 2006, Component B: Organic Peroxides Group Standard 2006
UN number	NA
Proper Shipping Name	NA
Packaging group	NA
Hazchem code	1T (recommended)
Uses	Universal adhesive anchoring system for concrete, hollow and solid masonry

2. Hazard Identification

Approval

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval: HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006, for Component A, HSR002629, Organic Peroxides Group Standard 2006 for Component B, and is classified as follows:

Classes

Component A:
 6.4A
 6.5B

Component B:
 6.5B
 5.2G

Hazard Statements

H319 - Causes serious eye irritation.
 H317 - May cause an allergic skin reaction.

H317 - May cause an allergic skin reaction.
 Organic peroxide, desensitized, SADT>60°C (no hazard statement)

SYMBOLS

WARNING



Other Classifications

This substance does contain dibenzoyl peroxide which is an oxidiser and may increase the intensity of a fire.

Precautionary Statements

Read label before use.
 Wash hands thoroughly after handling.
 Wear eye/face protection."
 Avoid breathing vapours.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves/eye protection/face protection.

Further precautionary statements can be found in Section 4 – First Aid.

3. Composition / Information on Ingredients

Component A - ingredients	CAS/ Identification	Class for ingredient(s)	Conc (%)
Methacrylic acid, monoester with propane-1,2-diol	27813-02-1	6.4A, 6.5B	15-25%
Ingredients not contributing to HSNO classes	mixture	NA	balance

Component B - ingredients	CAS/ Identification	Class for ingredient(s)	Conc (%)
Dibenzoyl peroxide, phlegmatized	94-36-0	5.2B, 6.4A, 6.5B (contact), 9.1D (fish), 9.1D (crustacean)	5-10%
Ingredients not contributing to HSNO classes	mixture	NA	balance

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

4. First Aid

General Information

You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service). If medical advice is needed, have product container or label at hand. IF exposed or concerned: Get medical advice.

Recommended first aid facilities Ready access to running water is recommended. Accessible eyewash is recommended.

Exposure

Swallowed Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.

Skin contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhaled Generally, inhalation of fumes is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards: There are no specific risks for fire/explosion for this chemical. Component B of this substance does contain dibenzoyl peroxide which is an oxidiser and may increase the intensity of a fire.

Suitable extinguishing substances: Carbon dioxide, extinguishing powder, foam.

Unsuitable extinguishing substances: Unknown.

Products of combustion: Carbon dioxide, and if combustion is incomplete, carbon monoxide, oxides of nitrogen and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

Protective equipment: No special measures are required.

Hazchem code: NA

6. Accidental Release Measures

Containment If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to stormwater.

Emergency procedures The container size will generally prevent a major spill. In the event of a large spillage (>100kg) alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).

Clean-up method	Collect material and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Keep in a cool, dry and dark place; 5°C to 25°C. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Protect from heat and direct sunlight. Keep away from ignition sources. Avoid contact with incompatible substances as listed in Section 10.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour. Do not smoke.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) 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 Stds (2016)	Ingredient	WES-TWA	WES-STEL
	methacrylic acid, monoester with propane-1,2-diol	No data	No data
	Dibenzoyl peroxide	50ppm, 242mg/m ³	100ppm, 483mg/m ³

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes



Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if splashes are likely.

Skin



Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Nitrile or NBR gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.

Respiratory

A respirator when airborne concentrations approach the WES (section 8). Use a organic vapour cartridge with a dust/mist filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	grey paste
Odour	ester like
pH	~6 (Component B)
Vapour pressure	0.1hPa at 20°C
Viscosity	~70mPas (dynamic at 20°C), >20s (kinematic at 20°C)
Boiling point	no data
Volatile materials	Component A: 0% organic solvents, Component B: 0% organic solvents, 20% water.
Freezing / melting point	no data
Solubility	not miscible
Specific gravity / density	1.7 g/cm ³
Flash point	>109°C

Danger of explosion	no data
Auto-ignition temperature	decomposition temperature: SADT 65°C
Upper & lower flammable limits	no data
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	flammable substances (component B)
Substance Specific Incompatibility	none known
Hazardous decomposition products	none known
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED or inhaled: may be irritating to mucous membranes.
 IF IN EYES: may be irritating to eyes.
 IF ON SKIN: may be irritating to skin. Sensitisation is possible by skin contact for some individuals.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: dibenzoyl peroxide 1072mg/kg (mouse), 2255mg/kg (rat).
	Dermal	No evidence of dermal toxicity.
	Inhaled	No evidence of inhalation toxicity.
	Eye	The mixture is considered to be an eye irritant, because some of the ingredients present are considered eye irritants in more concentrated form. (methacrylates – Part A)
	Skin	The mixture is considered to be a mild skin irritant. (Part A)
Chronic	Sensitisation	The mixture is considered to be a contact sensitizer, because some of the ingredients present in greater than 0.1% (methacrylic acid, monoester with propane-1,2-diol and dibenzoyl peroxide), is known to be a contact sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is not considered harmful/ecotoxic to the environment.

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is > 100 mg/L. Data considered includes: methacrylic acid, monoester with propane-1,2-diol data unavailable, dibenzoyl peroxide: 2.6-3.7 mg/L (7 day, fresh water fish).
Bioaccumulation	No data
Degradability	No data
Soil	No data available for the mixture.
Terrestrial vertebrate	This product is not considered harmful to terrestrial vertebrates. No LC ₅₀ (diet) data for ingredients are available and the classification is based on the LD ₅₀ (oral) – see section 11
Terrestrial invertebrate	The mixture is not considered harmful to terrestrial invertebrates.
Biocidal	Not applicable
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	The cartridges are a disposable injection system and therefore cannot be recycled. Send to landfill or similar.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

This mixture is not considered a hazardous substance for transport on land.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	Hazchem code:	NA

IMDG

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA	EmS	NA

IATA

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	NA		

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval: HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006, for Component A, HSR002629, Organic Peroxides Group Standard 2006 for Component B.

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

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Required if > 1000L is stored.
Approved handler	Not required.
Tracking	Not required.
Bundling & secondary containment	Required if > 1000L is stored.
Signage	Not required.
Location test certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval: HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006, for Component A, HSR002629, Organic Peroxides Group Standard 2006 for Component B, Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and 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 (or Safety Data Sheet)
PES	Prescribed 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 (including group standards).
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 work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
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, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
EPA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
WES 2016	The NZ Workplace Exposure Standards Effective from 2016, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
WES 2002	Workplace Exposure Standards published by the Occupational Safety and Health Service, Department of Labour, January 2002, ISBN 0-477-03660-0. These are the WES referred to under the Group Standard (HSNO approval) and may constitute a PES.
Other References:	Suppliers SDS

Review

Date	Reason for review
October 2016	Not applicable – new SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications, are based on our experience, EPA Guidelines and international classifications. This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: (09) 940 30 80.

