

## 1. Identification of Substance & Company



### Company Details:

Hilti (New Zealand) Ltd  
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 1050 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 CI 060
Other names	CI 060 KIT
Product code	CI 060
HSNO approval	HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006
Approval description	Construction Products (Subsidiary Hazard) Group Standard 2006
UN number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, n.o.s. (Bisphenol A Epoxy Resin)
Packaging group	III
Hazchem code	2Z
Uses	construction chemical

## 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), and is classified as follows:

### Classes

6.1E (oral)  
 6.3A  
 8.3A  
 6.5B  
 6.6B  
 6.9B  
 9.1B

### Hazard Statements

May be harmful if swallowed  
 Causes skin irritation.  
 Causes serious eye damage.  
 May cause an allergic skin reaction.  
 Suspected of causing genetic defects  
 May cause damage to organs  
 Toxic to aquatic life with long lasting effects.

### SYMBOLS

# DANGER



### Other Classifications

There are no other Classifications that are known to apply.

### Precautionary Statements

Keep out of reach of children.  
 Read label before use. Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wash hands thoroughly after handling.  
 Wear protective gloves/eye protection/face protection.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Do not breathe vapours.  
 Do not eat, drink or smoke when using this product.  
 Avoid release to the environment. Collect spillage.  
 Further precautionary statements can be found in Section 4 – First Aid.

### 3. Composition / Information on Ingredients

Component	CAS/ Identification	Class for ingredient(s)	Conc (%)
bisphenol-A epichlorhydrin resin	25068-38-6	6.3B, 6.4A, 6.5B (contact), 6.9B, 9.1B	25-50%
2,3-epoxypropyl o-tolyl ether	2210-79-9	6.3A, 6.5B (contact), 6.6B, 9.1B	10-25%
3,6,9,12-tetra-azatetradecamethylenediamine	4067-16-7	6.1D (oral), 8.3A, 6.5B, 6.6B, 6.9B, 9.1A	10-25%
benzyl alcohol	100-51-6	6.1D (oral, dermal), 6.4A, 6.5B (contact), 9.1D (fish, crustacean), 9.2B, 9.3C	2.5-10%

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 required. Accessible eyewash is required.

#### Exposure

<b>Swallowed</b>	Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. Immediately call a POISON CENTER or doctor.
<b>Skin contact</b>	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before re-use.
<b>Inhaled</b>	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

#### Advice to Doctor

Treat symptomatically

### 5. Firefighting Measures

<b>Fire and explosion hazards:</b>	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
<b>Suitable extinguishing substances:</b>	Carbon dioxide, extinguishing powder, foam, fog sprays.
<b>Unsuitable extinguishing substances:</b>	Water with full water jet.
<b>Products of combustion:</b>	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
<b>Protective equipment:</b>	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
<b>Hazchem code:</b>	2Z

### 6. Accidental Release Measures

<b>Containment</b>	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.
<b>Emergency procedures</b>	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. 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).

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

**7. Storage & Handling**

<b>Storage</b>	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be stored at 15-25°C and should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10.
<b>Handling</b>	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, mist or aerosols.

**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/m<sup>3</sup> for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (2013)	Ingredient	WES-TWA	WES-STEL
	No ingredient is listed	NA	NA
	Monomer: Epichlorohydrin		

**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 in Employment Act 1992 (HSE). 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** Protect eyes with goggles, safety glasses or full face mask. Avoid wearing contact lenses.



**Skin** Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Nitrile or Natural rubber 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.



**Respiratory** A respirator when airborne concentrations approach the WES (section 8). Use a respirator with an organic vapour cartridge. 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	light grey paste
Odour	characteristic
pH	no data
Vapour pressure	no data
Viscosity	no data
Boiling point	>150°C
Volatile materials	no data
Freezing / melting point	not determined
Solubility	not miscible
Specific gravity / density	1.05g/cm <sup>3</sup> at 20°C
Flash point	138°
Danger of explosion	not explosive
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	corrosive to eyes

## 10. Stability & Reactivity

Stability	Stable at room temperature. Can decompose slowly with localised heating above 150°C.
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	Strong oxidising agents, acids..
Hazardous decomposition products	Carbon monoxide, carbon dioxide, irritant gases and vapours.
Hazardous reactions	Polymerisation occurs in the presence of mineral acids.

## 11. Toxicological Information

### Summary

IF SWALLOWED: may be harmful if swallowed. May be irritating to the gastrointestinal tract and mucous membranes.

IF IN EYES: may cause eye irritation.

IF ON SKIN: may cause skin irritation resulting in redness. Sensitised individuals may experience an allergic skin reaction (e.g. dermatitis)

CHRONIC TOXICITY: This substance contains 2,3-epoxypropyl o-tolyl ether, which is a known mutagen and exposure may lead to cumulative health effects.

NOTE: the cured resin is not considered harmful.

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the mixture is between 2000 and 5000 mg/kg. Data considered includes: Bisphenol-A epichlorhydrin resin 15600mg/kg (mouse), 10.7mL/kg (rat), 2,3-epoxypropyl o-tolyl ether 4000mg/kg (rat), 3,6,9,12-tetra-azatetradecamethylenediamine 1600mg/kg (rat), benzyl alcohol 1040 mg/kg bw (rabbit); 1040 mg/kg bw (rabbit).
	<b>Dermal</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Bisphenol-A epichlorhydrin resin >20mL/kg (rabbit), benzyl alcohol 2000 mg/kg bw (rabbit).
	<b>Inhaled</b>	Using LC <sub>50</sub> 's for ingredients, the calculated LC <sub>50</sub> (inhalation, rat) for the mixture is >5,000 ppm. Data considered includes: 2,3-epoxypropyl o-tolyl ether 6090mg/m <sup>3</sup> /4h (rat).
	<b>Eye</b>	The mixture is considered to be corrosive to the eye, because one of the ingredients present at >3% (3,6,9,12-tetra-azatetradecamethylenediamine) is considered an eye corrosive.
	<b>Skin</b>	The mixture is considered to be a skin irritant, because some of the ingredients present are considered skin irritants in more concentrated form.
<b>Chronic</b>	<b>Sensitisation</b>	The mixture is considered to be a contact sensitizer, because 3 of the ingredients (2,3-epoxypropyl o-tolyl ether, benzyl alcohol and 3,6,9,12-tetra-azatetradecamethylenediamine) present in greater than 0.1% are known to be contact sensitizers.
	<b>Mutagenicity</b>	The mixture is considered to be a suspected mutagen, because 2,3-epoxypropyl o-tolyl ether present in greater than 0.1% is suspected to be a mutagen.
	<b>Carcinogenicity Reproductive / Developmental Systemic</b>	No ingredient present at concentrations > 0.1% is considered a carcinogen. No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. The mixture is considered to be a suspected target organ toxicant, because at least one of the ingredients (bisphenol-A epichlorhydrin resin) present in greater than 1% is suspected

**Aggravation of existing conditions**

to be a target organ toxicant. The resin may affect the blood and the hematopoietic system through dermal contact.  
None known.

**12. Ecological Data****Summary**

This substance is considered to be ecotoxic in the aquatic environment with long lasting effects.

**Supporting Data**

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is between 1 mg/L and 10 mg/L and at least one of the components is either bioaccumulative or persistent in the aquatic environment. Data considered includes benzyl alcohol 55 mg/L (24hr, Daphnia magna).
<b>Bioaccumulation</b>	No data
<b>Degradability</b>	Not readily biodegradable
<b>Soil</b>	No evidence of soil toxicity. Benzyl alcohol is toxic in the soil environment. EC <sub>50</sub> 50 mg/l (5mins, Photobacterium phosphoreum).
<b>Terrestrial vertebrate</b>	This product is not considered harmful to terrestrial vertebrates. No LC <sub>50</sub> (diet) data for ingredients are available and the classification is based on the LD <sub>50</sub> (oral) – see section 11 – oral toxicity.
<b>Terrestrial invertebrate</b>	No evidence of ecotoxicity towards terrestrial invertebrates.
<b>Biocidal</b>	Not applicable
<b>Environmental effect levels</b>	No EELs are available for this mixture or ingredients

**13. Disposal Considerations**

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	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.
<b>Contaminated packaging</b>	Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar.

**14. Transport Information****Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007**

Considered a hazardous substance for transport.

<b>UN number:</b>	3082	<b>Proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, n.o.s. (Bisphenol A Epoxy Resin)
<b>Class(es)</b>	9	<b>Packing group:</b>	III
<b>Precautions:</b>	Ecotoxic	<b>Hazchem code:</b>	2Z

**IMDG**

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

<b>UN number:</b>	3082	<b>Proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, n.o.s. (Bisphenol A Epoxy Resin)
<b>Class(es)</b>	9	<b>Packing group:</b>	III
<b>Precautions:</b>	Ecotoxic	<b>EmS</b>	F-A, S-F

**IATA**

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

<b>UN number:</b>	3082	<b>Proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, n.o.s. (Bisphenol A Epoxy Resin)
<b>Class(es)</b>	9	<b>Packing group:</b>	III
<b>Precautions:</b>	Ecotoxic		

## 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006.

### 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.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Required if > 1000L is stored.
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, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

## 16. Other Information

### Abbreviations

<b>Approval Code</b>	Approval HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006 Controls, EPA. <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>Ceiling</b>	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
<b>Controls Matrix</b>	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>ERMA</b>	Environmental Risk Management Authority (now EPA)
<b>EPA</b>	Environmental Protection Agency (previously known as ERMA)
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL</b>	Lower Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>MSDS (SDS)</b>	Material Safety Data Sheet (or Safety Data Sheet)
<b>STEL</b>	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
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UEL</b>	Upper Explosive Limit
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed.

**References**

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) <a href="http://www.epa.govt.nz/hs/compliance/chemicals.html">http://www.epa.govt.nz/hs/compliance/chemicals.html</a> , for specific chemicals.
<b>EPA Transfer Gazettes Controls Matrix</b>	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004) Part of the EPA New Zealand User Guide to the HSNO Control Regulations
<b>WES 2013</b>	The NZ Workplace Exposure Standards Effective from 2013, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>Other References:</b>	HILTI EU SDS

**Review**

<b>Date</b>	<b>Reason for review</b>
March 2012	Not applicable – new SDS
November 2014	Update, review of classes for ingredients. Review of toxicological data, formatting. DoL to WorkSafe, including IATA and IMDG information.

**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](mailto:info@datachem.co.nz) or phone: **(09) 940 30 80**.

