1. Identification of Substance & Company

Company Details:
Hilti (New Zealand) Ltd
Unit 1/B, 525 Great South Rd
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 CP 660, CFS-F FX
Other names	Hilti CP 660 Expanding Fire Seal, CFS-F FX
HSNO approval	HSR002544 for part A and part B
Approval description	Construction Products (Subsidiary Hazard) Group Standard 2006 for Part A and Part B
UN number	NA
Proper Shipping Name	Not regulated
Packaging group	NA
Hazchem code	1T (recommended)
Uses	2 component firestop foam for indoor applications.

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 Part A and Part B, and is classified as follows:

Classes	Hazard Statements
Part A:	
6.3A	Causes skin irritation.
6.4A	Causes eye irritation.
6.9B	May cause damage to organs
Part B:	
6.1D (inhalation)	Harmful if inhaled.
6.3A	Causes skin irritation.
6.4A	Causes eye irritation.
6.5A	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
6.5B	May cause an allergic skin reaction.
6.9A	Causes damage to organs through prolonged or repeated exposure

SYMBOLS

WARNING

Other Classifications

No other classifications are known to apply

Precautionary Statements

Keep out of reach of children.
Read label before use.
Use only outdoors or in a well-ventilated area.
Wash hands thoroughly after handling.
In case of inadequate ventilation wear respiratory protection.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/eye protection/face protection.
Do not breathe vapours.
Do not eat, drink or smoke when using this product.

NOTES:

1. Persons with a history of asthma or other respiratory problems, or who are known to be sensitised should NOT be involved in any work involving the handling of isocyanates (including use of CP 660).
2. The product may react with water/moisture. This may result in valve blockage or, possible pressure build-up and bursting. Ensure that container is always sealed effectively when stored.

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

3. Composition / Information on Ingredients

This substance is made up of two components. Both components are mixed within a static mixer in a volume ratio of ~3:1

Part A – ingredients (75% of total)	CAS/ Identification	Class for ingredient(s)	Conc (%)
Acrylic polymer dispersion and other fillers	proprietary	Non hazardous	30-75%
Ethylenediamine derivatives	mixture	6.3A, 6.4A	1-10%
Ferric oxide	1309-37-1	6.3A, 8.3A, 6.9A	1-5%

Part B – ingredients (25% of total)	CAS/ Identification	Class for ingredient(s)	Conc (%)
Diphenylmethanediisocyanate, isomers and homologues	9016-87-9	6.1B (inhalation), 6.3B, 6.4A, 6.9A (inhalation)	25-50%
Non hazardous ingredients	proprietary	Non hazardous	1-5%

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

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 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is classed as non-flammable.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam, fog sprays, water jets. Fight larger fires with alcohol resistant foam.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide, hydrogen cyanide 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:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	1T (recommended)

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. 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	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect 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. Store out of reach of children. Containers should be stored at 5°C - 25°C and should be kept closed in order to minimise contamination. Store in dry conditions. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. Increase ventilation. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols. Do not eat, drink or smoke when using this product.

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^3 for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (2013)	Ingredient	WES-TWA	WES-STEL
	Diphenylmethanediisocyanate, isomers and homologues	See Isocyanates below	
	Isocyanates (all)	0.02mg/m^3 (sen, as – NCO)	0.07mg/m^3 (sen, as – NCO)

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

Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible.

Skin

Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Neoprene and Latex 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 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	red liquid
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	not miscible or difficult to mix
Specific gravity / density	no data
Flash point	non flammable
Danger of explosion	not explosive
Auto-ignition temperature	400°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. Keep dry.
Incompatible groups	Moisture, alcohols, amines, aqueous acids and alkalis.
Hazardous decomposition products	Oxides of carbon, oxides of nitrogen, hydrogen cyanide
Hazardous reactions	Reaction with water (moisture), produces carbon dioxide. This can result of build up of pressure inside the container. Danger of bursting.

11. Toxicological Information

Summary

If SWALLOWED: may cause irritation to gastrointestinal tract.
IF IN EYES: may result in irritation
IF ON SKIN: may result in irritation. Sensitised individuals may have allergic reaction. Possible effects included dermatitis (skin swelling, reddening and blistering).
IF INHALED: Vapours may be harmful and irritating to the respiratory tract. Sensitised individual may experience an allergic reaction, e.g. asthma type symptoms, hyperactive airway, bronchitis (wheezing, gasping, unconsciousness), neurological effects (e.g., headache, euphoria, depression). Effects may re-occur upon exposure to extremely low levels of isocyanate and related chemicals. Effects may be delayed after initial exposure. Sensitisation is considered a long term (chronic) effect.

NOTE: This product does contain isocyanates, which are considered sensitising on contact and if inhaled. Prolonged, repeated or excessive exposure by inhalation of skin contact may cause sensitisation and allergic reaction leading to bronchial spasms, asthma or dermatitis.

This product hardens upon contact with moisture on the skin and in the eye.
The fully cured product is not considered toxic.

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: Diphenylmethanediisocyanate, isomers and homologues 49000mg/kg (rat).
	Dermal	Using LD_{50}'s for ingredients, the calculated LD_{50} (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Diphenylmethanediisocyanate, isomers and homologues 9400mg/kg (rabbit). Possible contact sensitiser.
	Inhaled	Using LC_{50}'s for ingredients, the calculated LC_{50} (inhalation, rat) for the mixture is between 1 and 5mg/L (mist). Data considered includes: Diphenylmethanediisocyanate, isomers and homologues 490 mg/m^3 (rat, dust/mist inhalation) = 0.49mg/L (rat). NOTE: Sensitisation is possible by inhalation (Asthma symptoms)
	Eye	The mixture is considered to be an eye irritant. Diphenylmethanediisocyanate, ethylenediamine derivatives and ferric oxideare considered eye irritants at higher concentrations.
	Skin	The mixture is considered to be a skin irritant, . Diphenylmethanediisocyanate, ethylenediamine derivatives and ferric oxideare considered skin irritants at higher concentrations.
Chronic	**Sensitisation**	The mixture is considered to be a contact and respiratory sensitizer. Diphenylmethanediisocyanate is a known sensitiser. Symptoms include trouble breathing, coughing and asthma. Hypersensitive person may react at very low concentrations of isocyanate.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is classed by EPA as a carcinogen. Diphenylmethanediisocyanate is group 3 IARC (not classifiable as to its carcinogenicity to humans.
	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	The mixture is considered to be a known or presumed target organ toxicant. Diphenylmethanediisocyanate may affect the respiratory tract and lungs if inhaled. This substance (part A) also contains ferric oxide (iron oxide) which a suspected systemic toxicant (toxic to lungs, mucous membranes) if inhaled.
	Aggravation of existing conditions	Individuals with impaired lung function or existing allergies (including dermatitis) should not work with this chemical – they are at increased risk of becoming sensitised with further potential health effects.

12. Ecological Data

Summary

This product is not considered ecotoxic in the aquatic environment.

Supporting Data

Aquatic	This mixture is not considered to be ecotoxic in the aquatic environment.
Bioaccumulation	not readily biodegradable
Degradability	No data
Soil	No evidence of soil toxicity.
Terrestrial vertebrate	Diphenylmethanediisocyanate is very low mammalian toxicity.
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data
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	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
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 Part A, HSR002629, Organic Peroxides Group Standard 2006 for Part 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.
Bunding & 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, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval: HSR002544, Construction Products (Subsidiary Hazard) Group Standard 2006, for Part A and Part 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).
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority (now EPA)
EPA	Environmental Protection Agency (previously known as ERMA)
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
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	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)
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.

References

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

Review

Date	Reason for review
June 2012	NA, 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 or phone: ***(09) 940 30 80.***

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