

1. Identification of Substance & Company**Product**

Product name	Ramset Hi-Seal FC
Product code	HSFCG600
HSNO approval	HSR002670
Approval description	Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006
UN number	Not regulated
Proper Shipping Name	NA
Packaging group	NA
Hazchem code	1T (recommended – no Hazchem signage required)
Uses	This product is a sealant / adhesive for construction applications.

Company Details

Company	Ramset New Zealand A Division of ITW New Zealand
Address	29 Poland Rd Glenfield Auckland 0627 New Zealand
Telephone	+64 9 444-3510

Emergency Telephone Number: 09 444-3510 (Monday to Friday. 8:00 am to 5:00 pm)
POISON CENTRE NUMBER: 0800 764 766 (24 Hours)

2. Hazard Identification**Hazard Classifications**

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006, HSR002670), and is classified as follows:

Classes:

- 6.5A respiratory sensitiser
- 6.5B contact sensitiser
- 6.8B Suspected of damaging fertility or the unborn child

SYMBOLS**DANGER****Other Classifications**

There are no other Classifications that are known to apply.

Hazard and Precautionary Statements

Hazard Statement	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
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Precautions

Read label before use.
 Avoid breathing vapours.
 Wear protective gloves/protective clothing.
 Contaminated work clothing should not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Use personal protective equipment as required.
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Further precautionary statements can be found in Section 4 – First Aid.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Class for ingredient(s)	Conc (%)
Diphenylmethane-4,4-diisocyanate	101-68-8	6.1B (inhalation), 6.1E (oral), 6.3A, 6.4A, 6.5A (respiratory), 6.5B (contact), 6.9A (inhalation)	<0.5%
Xylene	1330-20-7	3.1C, 6.1D (oral, dermal), 6.1E (inhalation) 6.3A, 6.4A, 6.8B, 6.9B (oral, inhalation), 9.1D	6%
non hazardous ingredients	NA	non hazardous	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 this MSDS, product container or label at hand. If exposed or concerned: Get medical advice/ attention.

Recommended first aid facilities

Ready access to running water is recommended. Accessible eyewash is recommended.

Exposure

Swallowed

IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. Contact a doctor if you feel unwell.

Eye contact

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. If irritation persists, call a POISON CENTER or doctor/physician.

Skin contact

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before re-use.

Inhaled

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. Effects may be delayed.

5. Firefighting Measures

Fire and explosion hazards:

This product has the potential to cause or create an additional hazard during fire. Containers may vent, rupture or burst at temperatures above 50°C. The flashpoint is 43°C.

Suitable extinguishing substances:

Water fog, Alcohol foam, carbon dioxide or dry chemical.

Unsuitable extinguishing substances:

Unknown.

Products of combustion:

Carbon dioxide, and if combustion is incomplete, carbon monoxide, hydrogen cyanide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces.

Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	1T (recommended – no Hazchem signage required)

6. Accidental Release Measures

Containment	If greater than 1000L is stored, secondary containment is required. Emergency plans to manage any potential spills must be in place. Prevent spillage from spreading or entering soil, waterways or drains.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Material will expand on release from container and harden in contact with atmospheric moisture. Hardening will progress from the surface inwards at a rate dependent on humidity and temperature. Allow spilled foam to solidify.
Clean-up method	Collect product and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	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.
Precautions	Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapour. 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 kept closed in order to minimise contamination. Keep from extreme heat and open flames.
Handling	Avoid contact with incompatible substances as listed in Section 10. 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. This product contains isocyanates (MDI) at very low levels, <0.5%. MDI is a respiratory sensitiser, but the risk of exposure by inhalation with this product is unlikely. The MDI has a high vapour pressure therefore MDI vapours are not emitted at normal operating temperatures.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by the NZ Department of Labour 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 (OSH 2011)	Ingredient	WES-TWA	WES-STEL
	Non-hazardous ingredients	no data	no data
	Diphenylmethane-4,4-diisocyanate	0.02mg/m ³	0.07mg/m ³
	Xylene	50ppm, 217mg/m ³	no data

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. Avoid wearing contact lenses.
Skin	Avoid repeated or prolonged skin contact. If discomfort is felt (e.g., if pre-existing conditions exist, such as dermatitis, cuts or sensitive skin), gloves may be helpful. If you suffer from dermatitis type skin conditions, use gloves. Neoprene and Latex gloves are recommended. Replace gloves frequently. Gloves should be checked for tears or holes

Respiratory before use.
A respirator with an organic vapour cartridge when airborne concentrations approach the WES (section 8). 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	Coloured thixotropic paste
Odour	Aromatic solvent odour
pH	No data
Vapour density	No data
Vapour Pressure	No data
Boiling point	No data
Volatile materials	No data
Freezing / melting point	No data
Solubility in water	Very low
Specific gravity / density	No data
Flash point	43°C (solids)
Danger of explosion	No data
Auto-ignition temperature	No data
Upper & lower flammable limits	No data
Corrosiveness	No data

10. Stability & Reactivity

Stability	Thermally stable.
Conditions to be avoided	Keep away from heat. Containers should be kept closed in order to avoid contamination.
Incompatible groups	Water, Alcohols, strong bases or amines, strong oxidizers, acids.
Substance Specific Incompatibility	Avoid heat.
Hazardous decomposition products	Thermal decomposition is highly dependent on conditions. A mixture including carbon monoxide, carbon dioxide, smoke and other toxic fumes (which may contain isocyanates) will be evolved when this material undergoes combustion or thermal or oxidative degradation
Hazardous reactions	Will react exothermically with water and all organic compounds containing active hydrogen groups.

11. Toxicological Information

Summary

No specific data is available for this product.

If swallowed, this mixture can result in nausea and vomiting. Contact with the eyes and skin may result in irritation. Vapours may be harmful and irritating to the respiratory tract.

This product may contain low levels of free organic 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. The fully cured paste is considered non hazardous.

Supporting Data

Acute	Oral	No data for mixture is available. Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral) for the mixture is >5,000 mg/kg. Data considered includes: Diphenylmethane-4,4-diisocyanate: 2200 mg/kg (mouse), Xylene 1590 mg/kg (mouse).
	Dermal	No evidence of dermal toxicity for any of the ingredients.
	Inhaled	Inhalation of high vapour concentrations may produce headaches, giddiness and irritation of the respiratory tract due to xylene. Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (inhalation, rat, mist) for the mixture is between 1 and 5 mg/L. Data considered includes: Diphenylmethane-4,4-diisocyanate 0.369 mg/l (rat), Diphenylmethanediisocyanate, isomers and homologues 490 mg/m ³ = 0.490 mg/L for a mist (aerosol), Xylene 27.6 mg/L (rat, vapour). Inhalation may cause possible allergic reactions (see sensitisation)

	Eye	The mixture is not considered to be an eye irritant. However, Diphenylmethane-diisocyanate and Xylene considered eye irritant at higher concentrations.
	Skin	The mixture is not considered to be a skin irritant. However, prolonged or repeated skin contact may cause drying or cracking, irritation and possible dermatitis. Xylene and Diisocyanates are skin irritants in more concentrated form. Also see sensitisation.
Chronic	Sensitisation	This product may contain polymerised organic isocyanates which are known sensitisers (contact and respiratory). The mixture is considered to be sensitising. It may cause skin sensitisation in sensitive individuals.
	Mutagenicity	No ingredient present at concentrations >0.1% considered a suspected or confirmed mutagen.
	Carcinogenicity	No ingredient present at concentrations >0.1% considered a suspected or confirmed carcinogen.
	Reproductive / Developmental Systemic	Xylene present is suspected to be a reproductive or developmental toxicant and is classed as 6.8B. The mixture is considered to be a known or presumed target organ toxicant, because Diphenylmethanediisocyanate present in greater than 1% is known or presumed to be a target organ toxicant. Xylene present in greater than 1% are suspected to be a target organ toxicant. Inhalation of xylenes may results in CNS disturbances including changes in numerative ability, reaction time, short-term memory and electroencephalograph.
	Aggravation of existing conditions	Any existing dermatitis may be aggravated.

12. Ecological Data

Summary

No specific data is available for this product. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below. The product is considered to have the following ecotoxicity groups:

Supporting Data

Aquatic	This substance is not considered harmful to fish and aquatic invertebrates.
Degradability	No data
Bioaccumulation	This substance is not expected to bioaccumulate significantly.
Soil	The mixture is not considered toxic to the soil environment. The substance may adsorb to soil and have low mobility.
Terrestrial vertebrate	This product is not considered toxic 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 – oral toxicity.
Terrestrial invertebrate	The mixture is not considered harmful to terrestrial invertebrates.
Biocidal	Not applicable

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	Pressurised container: Do not puncture or incinerate containers. Send to landfill or similar. Dispose of large quantities as hazardous waste.

14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Not considered a hazardous substance for transport.

UN number:	Not regulated	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	None	Hazchem code:	1T (recommended)

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval: Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006, HSR002670:).

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

Key workplace requirements are:

MSDS	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.
Response plan	Required if >1000kg is stored.
Approved handler	Not required.
Tracking	Not required.
Bunding and secondary containment	Required if >1000kg is stored.
Signage	Not required.
Location test certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

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 Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006, HSR002670, 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)
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
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	Material Safety Data Sheet (or Safety Data Sheet)
OSH	The Occupational Safety and Health Service of the Department of Labour (NZ)
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 as WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
VOC	Volatile Organic Compound Content
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 2011	The NZ Workplace Exposure Standards Effective from 2011, published by OSH - DoL and available on their web site – www.osh.dol.govt.nz .
Other References:	Suppliers MSDS, ChemIDplus

Review

Date	Reason for review:
January 2012 – issue 2	New MSDS.
Jan 2013	Re issued

Disclaimer

This MSDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The MSDS 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 MSDS) 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 for this MSDS have been estimated based on general information from the supplier (e.g., hazard, toxicological).** Full formulation details were not available. This MSDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the MSDS author, email info@datachem.co.nz or phone: **+64 9 940 30 80**.