



Material Safety Data Sheet

Infosafe No™ LQ1Q4	Issue Date :October 2012	ISSUED by HBFULL
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Product Name : **swift@hardener 4547****1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

Product Name swift@hardener 4547

Company Name H.B. FULLER COMPANY (ABN 003 638 435)

Address 16-22 Red Gum Drive Dandenong South
Victoria 3175 Australia

Emergency Tel. AUS: 1800 033111 (or IDD +61 3 9663 2130), NZ: 0800 734 607 (Or IDD +64 473 4607)

Telephone/Fax Number Tel: Customer Service Toll Free Numbers: Australia 1800 423 855; New Zealand: 0800 555 072

Recommended Use Hardening agent/ Curing agent

Other Information This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular, how to safely handle and use the product in the workplace. Since H.B. Fuller Company Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company. Our responsibility for the products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

2. HAZARDS IDENTIFICATION

Hazard Classification Australia
Classified as Hazardous according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC).
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

New Zealand:
Classified as Hazardous according to the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001, New Zealand.
Not classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

HSNO Classification:
6.1D (Inhalation - vapours, dusts or mists) - Substance that is acutely toxic
6.5A - Substance that is a respiratory sensitiser
6.5B - Substance that is a contact sensitiser
9.1C - Substance that is harmful in the aquatic environment

Hazard statement codes:
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement codes - Prevention:
P102 Keep out of reach of children. -This statement applies only where the substance is available to the general public.
P103 Read label before use. -This statement applies only where the substance is available to the general public.
P104 Read Safety Data Sheet before use.
P261 Avoid breathing fume/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.



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P280 Wear protective gloves.
P285 In case of inadequate ventilation wear respiratory protection.* *Specify appropriate type of equipment
Precautionary statement codes - Response:
GENERAL
P101 If medical advice is needed, have product container or label at hand.
-This statement applies only where the substance is available to the general public.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
INHALATION
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
SKIN
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.

Precautionary statement codes - Disposal:
P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.

Risk Phrase(s)

R20 Harmful by inhalation.
R42/43 May cause sensitisation by inhalation and skin contact
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrase(s)

S28 After contact with skin, wash immediately with plenty of soap and water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S38 If insufficient ventilation, wear suitable respiratory equipment.
S45 In case of accident or if you feel unwell seek medical advice immediately
S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Aliphatic polyisocyanate	Proprietary	50-100 %
	Hexamethylene diisocyanate	822-06-0	<1 %
	Ingredients determined not to be hazardous		Balance

4. FIRST AID MEASURES

Inhalation If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.
Ingestion Do NOT induce vomiting. Wash out mouth and lips with water. Seek immediate medical attention.
Skin Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.
Eye If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.
First Aid Facilities Normal washroom facilities.
Advice to Doctor Treat symptomatically.



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Other Information For advice in an emergency, contact a Poisons Information Centre (Phone Australia 13 1126; New Zealand 0800 POISON / 0800 764 766) or a doctor at once.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media Use water spray, foam, dry chemical or carbon dioxide.

Hazards from Combustion Products Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon dioxide, carbon monoxide, nitrous vitriol gases, isocyanate fumes and traces of hydrogen cyanide.

Specific Hazards Combustible liquid. This product will readily burn under fire conditions.

Precautions in connection with Fire Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Avoid inhalation of vapours and mists, and skin or eye contact. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing. Keep containers closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids. Reference should also be made to all applicable local and national regulations.

Storage Regulations Classified as a Class C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS1940. This product should be stored and used in a well-ventilated area away from naked flames, sparks and other sources of ignition.

Storage Temperatures +10°C to +25°C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure value assigned for this material by Safe Work, Australia or the Occupational Safety and Health Service (OSH) of the New Zealand Department of Labour. However, the available exposure limits for ingredients are listed below:

Safe Work, Australia Exposure Standards:			
Substance	TWA	STEL	NOTICES
	ppm	mg/m ³	ppm
			mg/m ³



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Isocyanates, all, (as -NCO)	-	0.02	-	0.07	Sen
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New Zealand Occupational Safety and Health Service (OSH) Workplace Exposure Standards:

Substance		TWA		STEL	NOTICES
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		ppm	mg/m ³	ppm	mg/m ³
Isocyanates, all, (as -NCO)	-	0.02		-	0.07
					Sen

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

'Sen' Notice: The substance may cause sensitisation by skin contact or by inhalation

No biological limits allocated.

Biological Limit Values**Engineering Controls**

Use with good general ventilation. If mists or vapours are produced, local exhaust ventilation should be used.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable mist/vapour filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material such as butyl rubber. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellowish liquid
Odour	Light
Melting Point	Not available
Boiling Point	Not available
Solubility in Water	Not miscible or difficult to mix
Solubility in Organic Solvents	Not available
pH Value	Not available
Vapour Pressure	Not available
Vapour Density (Air=1)	Not available
Coefficient Water/Oil Distr. Density	Not available
Flash Point	1.15 g/cm ³ at 20°C (DIN 51757)
	218°C (DIN 53213)



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Flammability	Combustible
Auto-Ignition Temperature	Not available
Flammable Limits - Lower	Not applicable
Flammable Limits - Upper	Not applicable
Dynamic Viscosity	1300 mPas at 20°C (Brookfield (ISO 2555))

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Heat and other sources of ignition.
Incompatible Materials	Reacts with alcohols, amines, aqueous acids and alkalis. Strong oxidising agents.
Hazardous Decomposition Products	Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon monoxide, carbon dioxide, nitrous vitriol gases, isocyanate fumes and traces of hydrogen cyanide.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	Available toxicity data given below.
Inhalation	Harmful by inhalation. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Ingestion	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
Skin	May be irritating to skin. The symptoms may include redness, itching and swelling. May produce an allergic reaction.
Eye	May be irritating to eyes. The symptoms may include redness, itching and tearing.
Chronic Effects	Not available
Acute Toxicity - Oral	For Hexamethylene Diisocyanate: LD50 (Oral, Rat): 738 mg/kg
Acute Toxicity - Dermal	For Hexamethylene Diisocyanate: LD50 (Dermal, Rabbit): 593 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Persistence / Degradability	Not available
Mobility	Not available
Environ. Protection	Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations	Australia: The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations. Product Disposal: Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be
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disposed through a licensed commercial waste collection service. In this specific case the product is a combustible substance and therefore can be sent to an approved high temperature incineration plant for disposal.

Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed.

Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected. In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the EPA New Zealand website under specific group standards.

Container Disposal:

The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service.

Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous.

In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

14. TRANSPORT INFORMATION

Transport Information

Australia:

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

New Zealand:

Not classified as Dangerous Goods for transport according to the NZS 5433:2012 Transport of Dangerous Goods on Land.

Marine Transport (IMO/IMDG):

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

Air Transport (ICAO/IATA):

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
No

IMDG Marine Pollutant (MP)

15. REGULATORY INFORMATION

Regulatory Information

Australia:

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.

Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

S6

Poisons Schedule

National and or International Regulatory Information

New Zealand:

Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

All components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC) or exempted.

Group Standard:

Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006



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HSNO Approval Number	HSR002670
Hazard Category	Harmful

16. OTHER INFORMATION

Date of preparation or last revision of MSDS MSDS Created: October 2012

Contact Person/Point For advice in an emergency contact:
Australia: 1800 033 111 (or IDD +61 3 9663 2130) .
New Zealand: 0800 734 607 (or IDD +64 4 473 4607)
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