

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

Product name	James Hardie Joint Sealant
Product code	Not assigned
UN number	NA
Proper Shipping Name	NA
Packaging group	NA
Hazchem code	NA
Uses	Joint Sealant

Company Details

Company	James Hardie Research Pty Limited
Address	10 Colquhoun Street Rosehill NSW 2142 Australia
Telephone	13 11 03

Emergency Telephone Number: 13 11 03 (AU) and 0800 808 868 (NZ)

2. Hazard Identification**Hazard classification for Australia (GHS)**

This product has been assessed according to GHS and is classified as follows:

GHS category	Hazard Code	Hazard Statements
Acute toxicity – Inhalation Cat 4	H332	Harmful if inhaled.
Respiratory sensitizer Cat 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitiser Cat 1	H317	May cause an allergic skin reaction.

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

NOTE: Contains isocyanates. May produce an allergic reaction.

Precautionary Statements**Prevention**

P261	Avoid breathing vapours.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves.
P285	In case of inadequate ventilation wear respiratory protection.

Response IF ON SKIN: Wash with plenty of soap and water.

P302+P352 P333+P313 P363	If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
P304+P340 P312 P341+P311	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician
Storage none	none
Disposal P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Concentration
Toluene diisocyanate	584-84-9	<1%
Ingredients determined not to be hazardous	proprietary	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

If medical advice is needed, have product container or label at hand. You should call the Poisons Information Centre if you feel that you may have been harmed or irritated by this product. The number is 13 11 26 (AU) and 0800 764 766 (NZ) (24 hr, 7 days a week emergency service).

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

Exposure

Swallowed	Do NOT induce vomiting. Give a glass of water to drink. If any symptoms occur, contact a doctor.
Eye contact	If product gets in eyes, wash material from them with running water for several minutes. If symptoms persist, seek 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: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

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 not classed as flammable, but is a combustible material.
Suitable extinguishing substances:	Not applicable.
Unsuitable extinguishing substances:	Not applicable.
Products of combustion:	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.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	1T (recommended, no signage required)

6. Accidental Release Measures

Emergency procedures	<p>If a significant spill occurs: 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. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).</p>
Clean-up method	<p>This product is not considered flammable or ecotoxic. Small spills do not require any special clean up method. Larger spills should be collected. 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. Do not wash material down stormwater drains.</p>
Disposal	<p>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.</p>
Precautions	<p>Slippery when spilt. Wear protective equipment to prevent eye and skin contamination and the inhalation of vapours. Work up wind or increase ventilation.</p>

7. Storage & Handling

Storage	<p>Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep in a cool, dry place. Avoid contact with incompatible substances as listed in Section 10.</p>
Handling	<p>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.</p>

8. Exposure Controls / Personal Protective Equipment

Exposure Standards

An Exposure Standard (ES) for the mixture has not been established. Below are the exposure standards for the ingredients that are listed in the NOHSC: 1003.

NOHSC (NOHSC:1003)	Ingredient	ES-TWA	ES-STEL
	Isocyanates, all (as -NCO) (Sen)	0.02mg/m ³	0.07mg/m ³

Note: Sen – sensitizer. This substance can cause a specific immune response in sensitized individuals. An affected individual may subsequently react to exposure to minute levels of that substance.

Engineering Controls

In industrial situations, concentration values below the ES value must be maintained. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe airborne 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 or goggles if splashes are likely.

Skin


Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves, e.g. PVA or Natural Rubber Gloves. Nitrile gloves are not recommended for Toluene diisocyanate. 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 ES (section 8). Use a respirator with an organic vapour cartridge and particulate filter (dust/mist). If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES Additional Information

No additional information

9. Physical & Chemical Properties

Appearance	liquid, various colours
Odour	aromatic
pH	no data
Vapour pressure	no data
Viscosity	not available
Boiling point	no data
Volatile materials	no data
Freezing / melting point	no data
Solubility	no data
Specific gravity / density	1.20 @ 20°C
Flash point	no data
Danger of explosion	not explosive
Auto-ignition temperature	no data
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	Avoid contact with moisture. Oxidising agents.
Hazardous decomposition products	oxides of carbon and nitrogen, smoke and other toxic fumes.
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: no adverse effects expected.

IF IN EYES: direct contact may be irritating.

IF ON SKIN: Sensitised individuals may experience an allergic skin reaction. This material may be irritating to the skin.

IF INHALED: may be harmful if inhaled. May cause an allergic response which can include 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 (e.g., exposure to vehicle exhaust).

CHRONIC TOXICITY: toluene diisocyanate is suspected of causing cancer if inhaled. Sensitisation is considered a long term (chronic) effect.

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: Toluene diisocyanate 3.06 to 4.13 g/kg (rat); Toluene 636 mg/kg (rat).
	Dermal	No evidence of dermal toxicity for the ingredients.
	Inhaled	Harmful if inhaled. Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (inhalation, rat) for the mixture is between 10 and 20mg/L (vapour). Data considered includes: Toluene diisocyanate 10 ppm (4hr, mouse, vapour inhalation) = 0.071mg/L.
	Eye	This mixture is not considered irritating to eyes.
	Skin	The mixture is not considered to be a skin irritant.
Chronic	Sensitisation	The mixture is considered a contact and respiratory sensitiser. Toluene diisocyanate is classed 6as a respiratory and skin sensitiser.
	Mutagenicity	No data for mixture is available. No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	Toluene diisocyanate is a suspected carcinogen. IARC possible human carcinogen (Group 2B), but present <1% in this mixture.
	Reproductive / Developmental	No evidence of reproductive/developmental toxicity.
	Systemic	This mixture is not classed as a systemic toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is not considered ecotoxic.

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is > 100 mg/L.
Bioaccumulation	No data.
Degradability	No data
Soil	The mixture is not considered to be toxic in the soil environment.
Biocidal	Not designed as a biocide.

13. Disposal Considerations

Restrictions	There are no product-specific restrictions. However, state and local disposal regulations may apply. Note that state and local disposal regulations may differ from federal disposal regulations.
Disposal method	Disposal of this product must comply with the requirements of state and local disposal regulations. The substance must be handled as hazardous waste and disposed of in an approved facility.
Contaminated packaging	Dispose of empty containers safely. Do not re-use containers for any other purpose.

14. Transport Information

There are no specific restrictions for this product (not a dangerous good).

UN number:	NA	Proper shipping name:	NA
Class(es)	NA	Packing group:	NA
Precautions:	Not applicable.	Hazchem code:	NA

15. Regulatory Information

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)	S6
Applicable prohibitions and notifications/licensing requirements	Not listed
Agricultural and Veterinary Chemicals Act	Not listed
Listing in the Australian Inventory of Chemical Substances (AICS)	Toluene diisocyanate: International Programme on Chemical Safety (IPCS) – EHC National Pollutant Inventory (NPI)-listed chemical Hazardous Substance High Volume Industrial Chemicals List (HVICL)
Additional information	Not applicable
GHS Hazardous Chemical Information List	Toluene diisocyanate: Carcinogenicity – category 2 Acute toxicity – category 1 Eye irritation – category 2A Specific target organ toxicity (single exposure) – category 3 Respiratory sensitisation – category 1 Skin sensitisation – category 1 Hazardous to the aquatic environment (chronic) – category 3

16. Other Information

Abbreviations

AICS	Australian Inventory of Chemical Substances
CAS Number	Unique Chemical Abstracts Service Registry Number
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ES	Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day.
GESTIS	Database on Hazardous substances, Information system on hazardous substances of the German Social Accident Insurance.
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSIS	Hazardous substance Information System, http://hsis.safeworkaustralia.gov.au/
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)
NICNAS	National Industrial Chemicals Notification and Assessment Scheme
NZ EPA CCID	New Zealand Environmental Protection Agency. Chemical Classification Information Database.
Peak Limitation	Peak Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
SDS	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
STOT	Specific Target Organ Toxicity
TWA	Time Weighted Average – generally referred to ES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number

References

Data	Unless otherwise stated comes from Hazardous Substances Information System (HSIS) for the specific chemical.
NOHSC: 1003	National Occupational Health and Safety Commission 1995, <i>Exposure Standards for Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]</i>
Other References:	Suppliers SDS

Review

Date	Reason for review
November 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 GHS classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is prepared in accordance with the Code of Practice for "Preparation of Safety Sheets for hazardous Chemicals" December 2011 in accordance with WHS regulations.

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