Flexible FAST Dual Tank Part B
Safety Data Sheet

1. Identification of Substance & Company

Product

Product name	Flexible FAST Dual Tank Part B
Product code	336341
HSNO approval	HSR002535
Approval description	Gases Under Pressure Mixtures (Subsidiary Hazard) Group Standard 2020
UN number	3500
DG class	2.2
Proper Shipping Name	CHEMICAL UNDER PRESSURE, N.O.S. (hydrofluoroolefin)
Packaging group	III
Hazchem code	2ZE
Uses	Low pressure polyurethane adhesive, Side-B Component, for PROFESSIONAL USE ONLY

Company Details

Company	**Viking Roofspec**	
Physical Address	80 Alexander Crescent Otara Auckland New Zealand	PO Box 14 451 Panmure Auckland 1741 New Zealand
Telephone	0800 729 799	
Fax	0800 729 788	
Website	www.vikingroofspec.co.nz	

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

NZ Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002535, Gases Under Pressure Mixtures (Subsidiary Hazard) Group Standard 2020). The substance has been classified as hazardous according to the criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS 7 Classes	Hazard Statements
Gas under pressure - compressed gas	H280 – Contains gas under pressure; may explode if heated
Acute toxicity category 4 (inhalation)	H332 - Harmful if inhaled.
Skin irritant category 2	H315 - Causes skin irritation.
Eye irritant category 2	H319 - Causes serious eye irritation.
Chronic aquatic category 3	H412 - Harmful to aquatic life with long lasting effects.

SYMBOLS

WARNING

Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

Prevention
P102 - Keep out of reach of children.
P103 - Read label before use.
P202 - Do not handle until all safety precautions have been read and understood.
P251 - Pressurized container: Do not pierce or burn, even after use
P261 - Avoid breathing vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection.

Response
P101 - If medical advice is needed, have product container or label at hand.
P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P332+P313 - If skin irritation occurs: Get medical advice/ attention.
P362 - Take off contaminated clothing and wash before re-use.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Storage
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.

Disposal
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Oxyethylene-oxypropylene block co polymer	9003-11-6	30-60%
Tris (1-chloro-2-propyl) phosphate	13674-84-5	15-30%
1,4-Butanediol	110-63-4	5-15%
trans-1,3,3,3-Tetrafluoroprop-1-ene	29118-24-9	7-13%
Glycerol	56-81-5	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

If medical advice is needed, have product container or label at hand. 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).

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Give a glass of water to drink.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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 without placing yourself at risk 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. This product has the potential to cause fire or to create an additional hazard during fire. Buildup of explosive mixtues possible. Container may rupture/explode in a fire. Remove undamaged cans if safe to do so. Leaking or burning cans should be extinguished only when absolutely necessary. Spontaneous or explosive reignition may occur. Extinguish fire in surrounding area.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder or water jet. Fight larger fires with water jet or alcohol resistant foam.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide, 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:	2ZE

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 storm water.
Emergency procedures	If a significant spill occurs: Stop leak if safe/necessary; Isolate area. Collect spill – see below; Transfer to container for disposal. Dispose of according to guidelines below (Section 13).
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	No special protective clothing is normally necessary.

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, open flames and direct sublight. Avoid contact with incompatible substances as listed in Section 10.
Handling	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 3mg/m^3 for respirable particulates and 10mg/m^3 for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	Glycerol	10mg/m^3	-

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 at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. 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. Select eye protection in accordance with AS/NZS 1337.
Skin	Protective gloves are recommended. PVC, Neoprene or nitrile gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1.
Respiratory	A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with an organic vapour cartridge., 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

Not applicable

9. Physical & Chemical Properties

Appearance	Amber to dark brown liquid. Forms an off-white to yellowish froth when released from the container
Odour	Slight ether and amine odour
Odour Threshold	no data
pH	no data
Freezing/melting point	<-20°C
Boiling Point	Propellant: -19°C
Flashpoint	does not flash
Flammability	non flammable
Upper & lower flammable limits	no data
Vapour pressure	0.00001mmHg
Vapour density	no data
Specific gravity/density	~1.2g/cm^3 @ 25°C (water = 1)
Solubility	water: partly soluble, does not react
Partition coefficient	no data
Auto-ignition temperature	no data
Decomposition temperature	no data
Viscosity	270mPa.s
Particle Characteristics	no data

10. Stability & Reactivity

Stability	Stable under normal conditions of use and recommended storage conditions.
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Temperatures below 60°F (16°C) or temperatures above 90°F (32°C). Avoid heat and flames.
Incompatible groups	Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers
Substance Specific Incompatibility	none known
Hazardous decomposition products	Oxides of carbon, oxides of nitrogen.
Hazardous reactions	Exposure to elevated temperatures can cause containers to rupture or explode. Contents are under pressure.

11. Toxicological Information

Summary

IF SWALLOWED: May cause gastrointestinal irritation: stomach distress, nausea, or vomiting. Repeated ingestion may be harmful.
IF IN EYES: may be irritating to eyes. Symptoms may include redness, swelling, stinging, and tearing. May cause temporary corneal injury. Product vapor may cause eye irritation with symptoms of burning and tearing.
IF ON SKIN: may causes skin irritation. Symptoms may include localized redness and discomfort.
IF INHALED: Mist or vapor may cause irritation of the nose, throat and respiratory tract. Symptoms may include sore throat, coughing, headache, nausea and shortness of breath. Inhalation of propellant may cause lightheadedness, headache, and lethargy.

Supporting Data

Acute	**Oral**	Using LD_{50}'s for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is >2,000mg/kg. Data considered includes: Tris (1-chloro-2-propyl) phosphate 1017mg/kg (female rat).
	Aspiration	This mixture is not considered an aspiration hazard.
	Dermal	Using LD_{50}'s for ingredients, the calculated LD_{50} (dermal, rat) for the mixture is >2000 mg/kg.
	Inhaled	Using LC_{50}'s for ingredients, the calculated LC_{50} (inhalation, rat) for the mixture is between 1 and 5mg/l.
	Eye	The mixture is considered to be an eye irritant, because some of the ingredients present are considered eye irritants in more concentrated form.
	Skin	The mixture is considered to be a skin irritant, because some of the ingredients present are considered skin irritants in more concentrated form.
Chronic	**Sensitisation**	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	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	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is considered harmful towards aquatic organisms. In all cases prevent run-off to drains, sewers and waterways.

Supporting Data

Aquatic	Using EC50's for ingredients, the calculated EC50 for the mixture is between 10 mg/L and 100 mg/L and at least one of the components is either bioaccumulative or persistent in the aquatic environment. Data considered includes: Tris (1-chloro-2-propyl) phosphate 54.2mg/L (48hr, Fish), 30mg/L (96hr, fresh water fish), 63mg/L (48hr, Daphnia magna), 41mg/L (96hr, Selenastrum capricornutum (algae)).
Bioaccumulation	No data
Degradability	No data
Soil	No evidence of soil toxicity.
Terrestrial vertebrate	This mixture is not considered toxic towards terrestrial vertebrates.
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.

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 Hazardous Substances (Disposal) Notice 2017 and 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	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is renedered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	3500	**Proper shipping name:**	CHEMICAL UNDER PRESSURE, N.O.S. (hydrofluoroolefin, nitrogen)
Class(es)	2.2	**Packing group:**	NA
Precautions:	Chemical under pressure	**Hazchem code:**	2YE

IMDG

UN number:	3500	**Proper shipping name:**	CHEMICAL UNDER PRESSURE, N.O.S. (hydrofluoroolefin, nitrogen)
Class(es)	2.2	**Packing group:**	NA
Precautions:	Chemical under pressure	**EmS**	F-C, S-V

IATA

UN number:	3500	**Proper shipping name:**	CHEMICAL UNDER PRESSURE, N.O.S. (hydrofluoroolefin, nitrogen)
Class(es)	2.2	**Packing group:**	NA
Precautions:	Chemical under pressure		

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002535, Gases Under Pressure Mixtures (Subsidiary Hazard) Group Standard 2020. All ingredients appear in the NZIoC.

Specific Controls

Key workplace requirements are:	
SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000L is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Not required.
Location compliance 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 and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval HSR002535, Gases Under Pressure Mixtures (Subsidiary Hazard) Group Standard 2020 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition, 2017, published by the United Nations.
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)
NZIoC	New Zealand Inventory of Chemicals
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 during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
Other References:	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

Review

Date	**Reason for review**
September 2025	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 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). 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: ***+64 21 1040951.***

Datachem