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1.0 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE SUPPLIER

Product Name:	HP33 Epoxy Hardener
Product Code:	HP33
Recommended use:	Used in conjunction with epoxy resin for adhesive and composites applications.
Supplier:	Adhesive Technologies NZ Limited
Street Address:	17 Corban Avenue, Henderson, Auckland
Telephone Number:	0064 9 838 6961 (8.00am to 5.00pm, Monday to Friday)
Facsimile:	0064 9 836 4849
Web Address	http://www.adhesivetechnologies.co.nz/
Emergency Telephone:	0064 3 479 7248 (From overseas)
National Poison Information Centre	0800 POISON (764 766) (within New Zealand)
New Zealand Fire Service	111
Date of issue	09/10/2024
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### 2.0 HAZARDS IDENTIFICATION

#### **Hazard Classification**

Acute Toxicity (oral):	Category 4
Acute toxicity (dermal):	Category 5
Acute Toxicity (inhalation – dust & mist):	Category 4
Skin Sensitisation:	Category 1
Specific Target Organ Toxicity (repeat):	Category 1
Germ Cell Mutagenicity:	Category 2
Skin Corrosion/Irritation:	Category 1B
Serious Eye Damage/Eye Irritation:	Category 1
Aquatic Toxicity (chronic):	Category 2

For the full text of the H-Statements mentioned in this Section, see Section 16.



Signal Word: DANGER

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#### **Precautionary Statements**

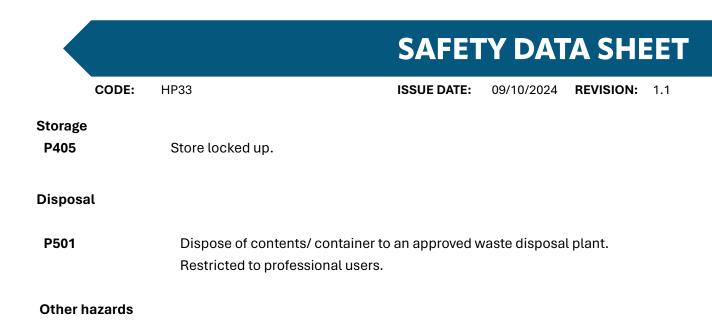
#### **Hazards Statement**

H312 + H332	Harmful in contact with skin or if inhaled
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes sever skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H317	May cause an allergic skin reaction
H341	Suspected of causing genetic defects
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects
Prevention	

CODE: HP33 **ISSUE DATE:** 09/10/2024 **REVISION:** 1.1 P201 Obtain special instructions before use P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/gas/mist/vapours P261 Avoid breathing vapours 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 P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment

### Response

P310	Immediately call a POISON CENTER or doctor/physician.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 +	IF ON SKIN (or hair): Remove/Take off immediately all contaminated
P352	clothing. Rinse skin with water/shower. Wash with plenty of water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 +	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
P338	lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P361	Take off immediately all contaminated clothing.
P362 + P364	Take off contaminated clothing and wash before reuse.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P361	Remove/Take off immediately all contaminated clothing.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.



# 3.0 COMPOSITION / INFORMATION ON INGREDIENTS

### Substance / Mixture: Mixture

#### Hazardous Ingredients:

Chemical Name	CAS No.	Concentration (%)
Isophoronediamine (3-aminomethly-3,5,5- trimethyl-cyclohexylamine)	2855-13-2	50-60
Triethylenetetramine	112-24-3	10-15
Phenol	108-95-2	20-25
Other non-hazardous components		to 100

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### 4.0 FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre Phone 0800 764 766.

General advice:	Move out of dangerous area. Call a POISON CENTRE or
	doctor/physician if exposed or you feel unwell. Show this safety data
	sheet to the doctor in attendance. Do not leave the victim
	unattended.
	Obtain medical attention. Do not give milk or alcoholic beverages.
Ingestion:	Never give anything by mouth to an unconscious person. If
	symptoms persist, call a physician.
Inhalation:	Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice
Skin Contact:	Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes
Eye Contact:	Immediately flush eye(s) with plenty of water. Remove contact lenses.
Notes to physician:	Protect unharmed eye. <b>Symptoms:</b> Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin
	may include: stomach or intestinal upset (nausea, vomiting, diarrhoea)
	irritation (nose, throat, airways) confusion.

### 5.0 FIRE FIGHTING MEASURES

#### Hazardous Combustion Products

In case of fire, the following hazardous smoke fumes may be produced: Carbon Oxides, Nitrous gases, ammonia.

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Fire Fighting Procedures	Clear fire area of all non-emergency personnel. Isolate fire and deny unnecessary entry. Cool fire exposed containers with water. Irritating fumes are released in fire situations. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Do not allow material or run-off to enter waterways. Stay upwind, keep out of low areas.
Fire-fighting equipment	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location
HAZCHEM	2X

### 6.0 ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate personnel to safe areas. Remove	
all sources of ignition. Use personal protective equipment. Ensure	
adequate ventilation. Beware of vapours accumulating to form	
explosive concentrations. Vapours can accumulate in low areas.	
Persons not wearing protective equipment should be excluded from	
area of spill until clean-up has been completed. Comply with all	
applicable federal, state, and local regulations. Suppress (knock	
down) gases/vapours/mists with a	
water spray jet.	

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Environmental precautions:

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Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. Methods for containment & Contain spillage, and then collect with noncombustible absorbent clean up: material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations

#### 7.0 HANDLING & STORAGE

Handling advice: Open drum carefully as content may be under pressure. Avoidformation of aerosol. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Take precautionary measures against static discharges. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations. Secondary operations, such as grinding and sanding, may roduce dust. Maintain good housekeeping. Do not permit dust layers to accumulate, for example, on floors, ledges, and equipment, in order to avoid any potential for dust explosion hazards.

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Storage advice:Keep container tightly closed in a dry and well-ventilated place.<br/>Containers which are opened must be carefully resealed and kept<br/>upright to prevent leakage. Observe label precautions. No smoking.<br/>Electrical installations / working materials must comply with the<br/>technological safety standards.

### Handling Precautions:

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Avoid breathing vapors. Use in a well-ventilated area. Wear rubber gloves (nitrile or butyl) and chemical resistant apron. Wear chemical splash goggles. Do not reuse empty containers.

**Storage Precautions:** Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well ventilated area.

### 8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Ingredients with workplace control measures

Component	CAS-No.	Value	Control parameters	Basis
Phenol	108-95-2	WES-STEL	2 ppm / 7.7mg/m³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
Triethylenetetramine	112-24-3		Contains no substances with occupational exposure limit values.	
Isophoronediamine (3-aminomethly-3,5,5- trimethyl- cyclohexylamine)	2855-13-2		MAK sensitization of skin (SH)	

### **Biological occupational exposure limits**

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Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Phenol	108-95-2	Total phenol	100 mg/l	Urine	New Zealand. Biological Exposure Indices.
Triethylenetetramine	112-24-3		Contains no substances with occupational exposure limit values.		
Isophoronediamine (3-aminomethly-3,5,5- trimethyl- cyclohexylamine)	2855-13-2		No data available		

#### Exposure controls (Phenol)

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### Personal protective equipment (Phenol)

#### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

#### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves/

Full contact Material: Viton® Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

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This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Splash contact Material: Viton® Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

### **Body Protection**

Flame retardant antistatic protective clothing.

#### **Respiratory protection**

required when dusts/vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Control of environmental exposure

Do not let product enter drains.

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## 9.0 PHYSICAL & CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Pale Straw Yellow
Odour	Sweet Odour
рН	Not available
Vapour pressure	82 Pa (4.5 mm Hg)
Vapour density	82 Pa (4.5 mm Hg)
Boiling Point	Not available
Melting/Freezing Point	Not available
Solubility (water)	Soluble
Specific Gravity/Density	0.98 gcm <sup>-3</sup> @ 25°C
Flash Point	110°C ( closed cup)
Flammable Limits	LFL: Not available UFL: Not available
Auto-ignition	>300°C

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# **10.0 STABILITY & REACTIVITY**

Chemical Stability	Stable under recommended storage conditions.		
Conditions to avoid	Avoid temperatures above 300°C. Potentially violent decomposition can occur, causing gas generation and pressure increases in closed systems.		
Materials to avoid	Reactive or incompatible with the following materials: oxidizing materials. Slightly reactive or incompatible with the following materials: acids and alkalis.		
Hazardous Decomposition Products	Decomposition products may include the following materials: carbon oxides, phenolics and water.		

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### 11.0 TOXICOLOGICAL INFORMATION

Acute Toxicity:						
Hazardous Material:	Phenol	CAS #:	108-9	95-2		
	-	LD50	LC50	Animal / Time		
		(mg/Kg)	(mg/L)			
Oral:		317.0		Rat		
Inhalation:			900.0	Rat/8h		
Dermal:		630.0				
Chronic Toxicity: No ad	ditional information					
Corrosion / Irritation:						
Dermal:		Skin – Ra	bbit – Sev	vere skin irritation – 24 h		
Ocular:		Eyes – Ra	bbit – Co	rrosion to eyes		
Sensitisation: No additi	ional information					
Specific Target Organ Toxicity:		May caus	May cause damage to organs through prolonged or repeated			
		exposure				
Carcinogenicity:		No additi	No additional information			
Mutagenicity:		No additional information				
Reproductive Toxicity:		No additi	No additional information			

#### **Acute Health Effects**

(Polyoxypropylenediamine)

Test	Specie	S	Result	Exposure
LD50 Oral	Rat	2,885 r	ng/kg	-
LD50 Derm	nal	Rat	> 2,980	) mg/kg -

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Systemic Effects Except for Skin sensitization, repeated exposure is not likely to cause significant adverse effects.Carcinogenicity No data is available on the product itself.

Mutagenicity: No data is available on the product itself.

CAS #:	112-	-24-3		
LD50	LC50	Species / Time		
(mg/Kg)	(mg/L)			
1150		Rat		
1550		Rabbit		
Dn				
Cause burns				
No additional inf	formation			
skin contact				
No additional information				
No additional information				
No evidence of genotoxic effects in vivo				
No additional information				
	LD50 (mg/Kg) 1150 1550 DN Cause burns No additional inf skin contact No additional inf No additional inf No additional inf	LD50  LC50    (mg/Kg)  (mg/L)    1150  1550    1550		

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Acute Toxic	ty:			
Hazardous		CAS #:		2855-13-2
Material:	Isophoronediamine			
	(3-aminomethly-3,5,5-trimethyl-			
	cyclohexylamine)			
		LD50	LC50	Species / Time
		(mg/Kg)	(mg/L)	
Oral:		1030		Rat
Dermal:		2000		Rat
Inhalation:		1.01*	5.01	Rat
Chronic Tox	icity: No additional information			
Corrosion /	rritation:			
Dermal:		Corrosive	e (Rabbit)	
Ocular:		Corrosive	e (Rabbit)	
Sensitisatio	<b>n:</b> Sesnsitisation after skin contact possible			
Specific Tar	get Organ Toxicity:	Repeated or prolonged exposure may cause		
		skin sens	itisation.	
Carcinogenicity:		Study scientifically not justified		
Mutagenicity:		No mutagenic effect was found in various test with		
		bacteria and mammalian cell culture. The substances		
		was not mutagenic in a test with mammals.		

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Reproductive Toxicity:	Repeated oral uptake of the substance did not cause
	damage to reproductive organs.

### 12.0 ECOLOGICAL INFORMATION

Ecotoxicity:					
Hazardous Material:PhenolCAS #:		108	8-95-2		
			LC50	EC50	Time
			(mg/L)	(mg/L	L)
Leuciscus idus (Golde	en orfe)		14.0 – 25.0	)	48 h
Carassius auratus (go	ldfish)		36.1 – 68.8	3	96 h
Daphnia magna (Wate	er flea)			56.0	48 h
Chlorella vulgaris (Fre	sh water a	algae)		370.0	96 h
Persistence and deg	radeabilit	<b>y:</b> Readily biodegradab	ole. Pheno	l, Liquifie	ed: Half – life: day 15 hours, night 12 minutes
Bioaccumulative pot	ential:				
Mobility in soil: Mobi	le in soil a	nd water			
Other adverse effect	s:				
Ecotoxicity:					
Hazardous Material:	Isophoro	nediamine	CAS #:		2855-13-2
	(3-amino	methly-3,5,5-trimethyl-			
	cyclohexy	lamine)			
			LC50	EC50	Time
			(mg/L)	(mg/L)	
Leuciscus idus (Golden orfe)		110.0		96 h	
Daphnia magna (Water flea)			23.0	48 h	
Desmodesmus subspicatus			37.0	72 h	

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(previous name: Scenedesmus subspicatus)		
Persistence and degradeability:		

No data available

Bioaccumulative potential:
No data available.
Mobility in soil:
No data available.
Other adverse effects:
No data available.

Ecotoxicity:						
Hazardous Material:	Triethylenetetramine	CAS #: 112		112	2-24-3	
		LC50	EC50		Time	
		(mg/L)	(mg/L)			
Pimphales promelas (fath	nead minnow)	>100.0			96 h	
Daphnia magna (Water flea)			>10.0 – 10	0.0	48 h	
Pseudokirchneriella subcapitata (green algae)			>10.0 – 10	0.0	72 h	
Persistence and degrade	eability:					
Not readily biodegradable	9.					
<b>Bioaccumulative potent</b>	ial:					
No data available						
Mobility in soil:						
Immobile						
Other adverse effects:						
Biochemical Oxygen Demand (BOD) no data available						

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(Polyoxypropylenediamine)

	Species		Result
LC50	Fresh water fish	96 h	>15 mg/L
LC50	Marine water fish	96 h	772.14 mg/L
EC50	Fresh water Daphnia	48 h	80 mg/L
EC50	Marine water Daphnia	48 h	418.34 mg/L
EC50	green algae	72 h	15 mg/L

Degradability	Under OECD guidelines this material cannot be considered as readily degradable.			
Bioaccumulation	Moderate			
	$Log P_{ow} = 1.34$			
Legacy HSNO Classification	9.1B (algal) Very ecotoxic in the aquatic environment			
	<ul><li>9.1 (crustacean) Harmful in the aquatic environment</li><li>C</li></ul>			
	9.3B Ecotoxic to terrestrial vertebrates			

### 13.0 DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must follow all Federal, State/Provincial, and local laws and regulations.

FOR UNUSED AND UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator, or other destruction device.

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**General information** The generation of waste should be minimised or avoided wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

# **Disposal methods** Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible. Do not discharge into drains or watercourses or onto the ground.

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### 14.0 TRANSPORTATION & REGULATORY INFORMATION

#### **ROAD, RAIL, SEA AND AIR TRANSPORT**

UN Number	2735
Proper Shipping name	Polyamines, liquid, corrosive, n.o.s. (mixture contains isophoronediamine)
DG Class	8
Packing Group	III
HAZCHEM code	2X
IMO/IMDG class	8
ICAO/IATA class	8
EMS code	F – A, S – B
Marine pollutant	Yes

### **15.0 REGULATORY INFORMATION**

EPA Approval:	The HSNO Approval Number for this Group Standard is HSR002658.
Group Standard:	Surface Coatings and Colourants (Corrosive) Group Standard 2020
Poison Schedule	

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### **16.0 OTHER INFORMATION**

#### References

https://echa.europa.eu/information-on-chemicals/cl-inventory-databas

https://www.epa.govt.nz/database-search/chemical-classification-and-information-database-ccid/

https://www.epa.govt.nz/

RCNZ Approved HSNO CoP Preparation of Safety Data Sheets

https://www.epa.govt.nz/assets/Uploads/Documents/Hazardous-Substances/GHS2/Guide to Classifying Hazardous Substances in NZ.pdf

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This version replaces all previous versions.

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Product Information Manager (+64) 9 838 6961