SAFETY DATA SHEET

Issue Date 14-Aug-2017 **Revision Date** 14-Aug-2017 **Version** 1

Section 1: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

EPIKURE™ Curing Agent 3274

Product Name Doming Resin Hardener

Description Slightly Amber Liquid

Other means of identification
UN Number 2735

Recommended use of the chemical and restrictions on use
Recommended Use Resin Curing Agent

Details of the supplier of the safety data sheet
Manufacturer
Norski Holdings Ltd
10 Northpoint Street
Plimmerton
Wellington 5247
New Zealand

For further information, please contact
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Section 2: HAZARD(S) IDENTIFICATION

Regulatory information

EPA New Zealand HSNO approval code or group standard	**Surface Coatings and Colourants (Corrosive) Group Standard 2006 HSR 002658**

HSNO Classification of the substance or mixture :

SKIN CORROSION/IRRITATION - Category 1B	B
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	8.3A
RESPIRATORY SENSITIZATION - Category 1	6.5A 6.8
TOXIC TO REPRODUCTION - Category 2	B 6.8
TOXIC TO REPRODUCTION - Category 2	B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3	6.9
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [blood system, lungs, liver] - Category 1	6.9A

GHS Label elements

Signal Word Danger

Hazard statements :

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361f Suspected of damaging fertility.
H361d Suspected of damaging the unborn child.
H335 May cause respiratory irritation.
H372 Causes damage to organs through prolonged or repeated exposure: (blood system, lungs, liver)

Precautionary statements

General Not applicable.

Prevention Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wear protective gloves.
Wear eye or face protection.
Wear protective clothing.
In case of inadequate ventilation wear respiratory protection.
Use only outdoors or in a well-ventilated area.
Do not breathe vapor.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.

Response :Get medical attention if you feel unwell.
IF exposed or concerned:
Get medical attention.
IF INHALED:
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a POISON CENTER or physician.
If experiencing respiratory symptoms:
Call a POISON CENTER or physician.
IF SWALLOWED:
Immediately call a POISON CENTER or physician.
Rinse mouth.
Do NOT induce vomiting.
IF ON SKIN (or hair):
Take off immediately all contaminated clothing.
Rinse skin with water or shower.
Wash contaminated clothing before reuse.

Immediately call a POISON CENTER or physician.
IF IN EYES:
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or physician.

Storage Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards

N/A

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS

Substance/mixture :Mixture

Ingredient name	% by weight	CAS number
Poly(oxypropylene) diamine	50 - 70	9046-10-0
Phenol, 4-Nonyl-, Branched	35 - 50	84852-15-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Description of necessary first aid measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses.
Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician.
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery

position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

Specific treatments

Protection of first aid personnel

In case of inhalation of decomposition products in a fire, symptoms may be delayed.
The exposed person may need to be kept under medical surveillance for 48 hours.

No specific treatment.
No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	None known.
Specific hazards arising from the Chemical	:	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon oxides nitrogen oxides other organic compounds
Special protective actions for fire-Fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode .
Hazchem code		**3WE**

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Emergency Responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational Hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Occupational exposure limits		**None**
Recommended monitoring procedures	:	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Appropriate engineering controls	:	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	:	Liquid
Color	:	Water slightly amber
Odor	:	characteristic.
Odor threshold	:	Not available
pH	:	Not available
Melting point/ Freezing point	:	Not available
Boiling point	:	260 °C (500.00 °F)

Flash point	:	124 °C (255.20 °F)
Burning time	:	Not available
Burning rate	:	Not available
Evaporation rate	:	Not available
Flammability (solid, gas)	:	Not available
Lower and upper explosive (flammable) limits	:	**Lower:** Not available **Upper:** Not available
Vapor pressure	:	Not available
Vapor density	:	Not available
Relative density	:	Not available
Solubility	:	Not available
Solubility in water	:	Partial
Partition coefficient: n-octanol/water	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
SADT	:	Not available
Viscosity	:	**Dynamic:** Not available **Kinematic:** Not available

Other information

No additional information.

Section 10: STABILITY AND REACTIVITY

Reactivity	:	Stable under normal conditions.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Keep away from heat, sparks, flame and other ignition sources. Exposure to water vapour.
Incompatible materials	:	strong acids, strong oxidizing agents,
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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Section 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Poly(oxypropylene) diamine				
	LD50 Oral	Rat	2,885 mg/kg	-
	LD50 Dermal	Rabbit	2,980 mg/kg	-
Phenol, 4-Nonyl-, Branched				
	LD50 Oral	Rat	1,300 mg/kg	-

Conclusion/Summary : Not available

Irritation/Corrosionn

Product/ingredient name	Result	Species	Score	Exposure	Observation
Phenol, 4-Nonyl-, Branched	Skin - Severe irritant	Rabbit		24 hrs	-
	eyes - Severe irritant	Rabbit			-

Conclusion/Summary
Skin : Not available
eyes : Not available
Respiratory : Not available

Sensitization

Conclusion/Summary
Skin : Not available
Respiratory : Not available

Mutagenicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Poly(oxypropylene) diamine	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Phenol, 4-Nonyl-, Branched	Category 1		blood system Liver Lungs

Aspiration hazard

Not available

Information on the likely routes of exposure : Not available

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure

Skin contact : Causes severe burns.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :Adverse symptoms may include the following:
pain
watering
redness

Inhalation :Adverse symptoms may include the following:
respiratory tract irritation
coughing
wheezing and breathing difficulties
asthma
reduced fetal weight

Skin contact :
increase in fetal deaths
skeletal malformations
Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight

Ingestion :
increase in fetal deaths
skeletal malformations
Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Long term exposure

Potential immediate effects : Not available

Potential delayed effects : Not available

Potential chronic health effects

Conclusion/Summary : Not available

General : Causes damage to organs through prolonged or repeated exposure:
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Not available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity

Product/ingredient name	Result	Species	Exposure
4-nonylphenol, branched			
	Acute LC50 138.25 µg/l Fresh water	Fish - Fathead minnow	96 h
	Acute LC50 135.1 µg/l Fresh water	Fish - Bluegill	96 h

	Acute EC50 0.33 mg/l Fresh water	Aquatic plants - Green algae	72 h
	Acute EC50 0.41 mg/l Fresh water	Aquatic plants - Green algae	96 h

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Phenol, 4-Nonyl-, Branched	5.4	2.4	low

Mobility in soil

Soil/water partition coefficient (KOC) : Not available

Other adverse effects :No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

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:The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil waterways, drains and sewers.

Section14: Transport Information

UN Number 2735

Proper shipping name POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Poly(oxypropylene) diamine)

Description Liquid
Hazard Class 8
Packing Group II
Environmental hazard
Special Precautions for users
Hazchem code 3WE
IERG

IMDG

UN/ID no 2735

Proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Poly(oxypropylene) diamine)
Description	Liquid
Hazard Class	8
Packing Group	II
EmS-No	
Special Precautions for users	
Marine pollutant	

Transport in Bulk According to Annex II of MARPOL and the IBC CODE

IATA

UN/ID no	2735
Proper shipping name	
Description	Liquid
Hazard Class	8
Packing Group	II
ERG Code	

Section 15: REGULATORY INFORMATION

In New Zealand this product must comply with the Hazardous Substances and New Organisms Act and Regulations Approved Handlers and Location Test Certificates are not required, however Emergency Management and Identification requirements must be met depending on trigger quantities held.

Revision Date 06-Jul-2017

Section 16: ANY OTHER RELEVANT INFORMATION

Revision Date	14-Aug-2017
Revision Note	New Format

Key or legend to abbreviations and acronyms used in the safety data sheet

Disclaimer

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation, and verification. Before using any product, read its label.

End of Safety Data Sheet