



## MATERIAL SAFETY DATA SHEET

### 421 EPOXY RESIN BASE

Effective Date : March 2012

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## I. Identification

**MANUFACTURER:** Norski Holdings Ltd, 10 Northpoint Street, Plimmerton, 5024 New Zealand

**PRODUCT NAME:** 421 Epoxy Resin Base

**PRODUCE CODE:** 421 Epoxy Resin Base

**RECOMMENDED USES:** Construction of fibre reinforced equipment and fittings. Suitable for construction of recreational water craft. Corrosion resistant flooring and coatings.

**HSNO CLASSIFICATION:** **6.1D:** Acutely toxic (oral, dermal, inhalation); **6.3A:** Irritating to the skin; **6.4A:** Irritating to the eyes; **6.5B:** Contact sensitisers; **9.1B:** Very ecotoxic in the aquatic environment.

**CHEMICAL NAME:** Bisphenol A diglycidyl ether polymer; **CAS NO.** 25068-38-6; **WEIGHT %:** >60

**CHEMICAL NAME:** Bisphenol F diglycidyl ether polymer; **CAS NO.** 28064-14-4; **WEIGHT %:** <20

**CHEMICAL NAME:** Benzyl alcohol; **CAS NO.** 100-51-6; **WEIGHT %:** <20

Other ingredients determined not to be hazardous **WEIGHT** To 100

## II. Physical Data

**BOILING POINT:** Not available.

**MELTING/FREEZING POINT:** Not available.

**SOLUBILITY/WATER:** Not Miscible.

**FLASH POINT:** 251<sup>o</sup>C (closed cup).

**FLAMMABLE LIMITS:** LFL: Not available; UFL: Not available.

**AUTO-IGNITION:** >300<sup>o</sup>C.

**SPECIFIC GRAVITY/DENSITY:** 1.14 g/cm<sup>3</sup> [25<sup>o</sup>C (77<sup>o</sup>F)]

**VAPOUR PRESSURE:** 82 Pa (4.5 mm Hg)

**VAPOUR DENSITY:** >1 [Air = 1]

**pH:** ~5

**APPEARANCE, COLOUR AND ODOUR:** Liquid, colourless, sweet odour.

## III. First Aid

**INHALATION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

**SKIN CONTACT:** Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water for at least 15 minutes. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

**EYE CONTACT:** Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention.

**INGESTION:** Do not induce vomiting. Rinse mouth with water. Give plenty of water to drink.

**TREATMENT:** Treat symptomatically.

**EMERGENCY:** 0800 POISON (764 766)

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#### IV. Fire-fighting Measures

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide.

**FIRE AND EXPLOSION HAZARDS: DANGER: Corrosive.** Clear fire area of all non-emergency personnel. Cool fire exposed containers with water. Irritating fumes are released in fire situations. Do not allow material or run-off to enter waterways. Stay upwind, keep out of low areas.

**FIRE-FIGHTING EQUIPMENT:** Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots). Use approved positive pressure self contained breathing apparatus.

**HAZCHEM:** 3Z.

#### V. Accidental Measures

**PERSONAL PRECAUTIONS:** Use cautious judgement when cleaning up spills. Shut off leaks, if possible without personal risk.

**ENVIRONMENTAL PRECAUTIONS:** Dike and contain. Contain run-off and dispose of properly. Remove contaminated soil to remove contaminated trace residues. Prevent from entering into drains, ditches or rivers.

**CLEAN-UP METHODS (SMALL):** Soak up with an absorbent material such as clay, sand, sawdust or Zorbball. Place in non-leaking container. Seal tightly for proper disposal.

**CLEAN-UP METHODS (LARGE):** Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent material such as clay, sand, sawdust or Zorbball. Place in non-leaking container. Seal tightly for proper disposal. Flush area with water to remove trace residue.

#### VI. Handling and Storage

**HANDLING:** Keep out of reach of children. Put on appropriate PPE (see Section VII). Causes skin irritation and sensitivity. Avoid contact with skin, eyes and clothing. Wash with soap and water before eating, drinking, smoking, applying cosmetics or using toilet facilities. Do not breathe vapour or mist. Clean up spilled material immediately, and wash clothes, equipment and work area after use.

**STORAGE:** Store in a cool, dry place with adequate ventilation. Keep containers closed when not in use.

#### VII. Exposure Controls/Personal Protection

WEL = workplace exposure limit; TWA = time weighted average; STEL = short term exposure limit

**OCCUPATIONAL EXPOSURE LIMITS:** None established.

**ENGINEERING CONTROLS:** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

**PERSONAL PROTECTION: Respiratory:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. **Skin:** 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. **Eye:** 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. **Hand:** Recommended – polyvinyl alcohol (PVA), Butyl rubber, EVAL, Neoprene.

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### VIII. Stability and 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.

### IX. Toxicological Information

#### POTENTIAL HEALTH EFFECTS

**Inhalation:** Vapours are unlikely due to physical properties.

**Ingestion:** Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

**Skin:** Prolonged or repeated contact may cause skin irritation.

**Eye:** May cause eye irritation. Corneal injury is unlikely.

#### ACUTE HEALTH EFFECTS

**Test:** LD50 Oral

**Species:** Rat

**Result:** 30,000mg/kg

**Exposure:** -

**Test:** LD50 Dermal

**Species:** Rabbit

**Result:** 20,000mg/kg

**Exposure:** -

**Test:** LD50

**Species:** Rat

**Result:** >1,200mg/kg

**Exposure:** -

**SYSTEM EFFECTS:** Except for skin sensitization, repeated exposure is not likely to cause significant adverse effects.

**CARCINOGENICITY:** IARC has classified DGEBA as non-carcinogenic.

**MUTAGENICITY:** In animal studies, did not interfere with reproduction. Animal genetic toxicity studies were negative.

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### X. Ecological Information

**ECOTOXICITY:** Based on information for DGEBPA.

**Species:** Pimephales Promelas

**Period:** 96hr

**Result:** 3.1mg/L

**Species:** Daphnia magna

**Period:** 48hr

**Result:** 1.4 - 1.7mg/L

**DEGRADABILITY:** Under OECD guidelines, this material is considered readily degradable.

**BIOACCUMULATION:** Moderate Log  $P_{ow}$  = 3 - 5

**HSNO:** 9.B very ecotoxic in the aquatic environment.

### XI. Disposal Considerations

**DISPOSAL:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with 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.

### XII. Transport Information

**ROAD, RAIL, SEA AND AIR TRANSPORT UN NUMBER:** 3082

**PROPER SHIPPING NAME:** Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin mixture).

**DG CLASS:** 9

**PACKING GROUP:** III

**HAZCHEM CODE:** 3Z

**IMO/IMDG CLASS:** 9

**ICAO/IATA CLASS:** 9

**EMS CODE:** F - A, S - F

**MARINE POLLUTANT:** Yes

### XIII. Regulatory Information

**ERMA APPROVAL CODE:** HSR002670

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