

Material Safety Data Sheet

| Section 1: | Identification of Product & Supplier |
|-------------------------|---|
| Product: | Megapoxy H Rapid Set - Part A (Use in conjunction with Megapoxy H Rapid Set - Part B) |
| Classification: | Hazardous according to criteria of Worksafe Australia |
| Uses: | Liquid epoxy resin for use in civil engineering. |
| Supplier: | Vivacity Engineering Pty Ltd |
| ABN: | 78 305 545 664 |
| Street Address: | 3 Sefton Road Thornleigh, NSW 2120, Australia |
| Telephone: | 61 2 9875 3044 |
| Facsimile: | 61 2 9875 3665 |
| Emergency Phone: | 61 2 9484 7958 or 0418 112 515 |
| e mail: | info@megapoxy.com |

| Section 2: | Hazards Identification |
|-------------------------|--|
| Hazard Category: | Xn, Xi Irritant |
| Risk Phrases: | R36/38 Irritating to skin and eyes. R21/22 Harmful in contact with skin and if swallowed. R43 May cause sensitisation by skin contact. |
| D.G. Class: | Not classified as dangerous goods |
| Subsidiary Risk: | Nil |
| Poison Schedule: | S 5 |

This product is a Schedule Poison S 5 and must be stored, maintained and used in accordance with the relevant regulation.

| Section 3: | Composition & Information on ingredients | | | | | | | | | | | | |
|--------------------------|---|------------|---------|------------|-------------------------|------------|---------|--------------------------|------------|-----|-----------------|-----------|-----|
| Ingredients: | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Name</th> <th style="width: 20%;">Cas No.</th> <th style="width: 30%;">Proportion</th> </tr> </thead> <tbody> <tr> <td>Bisphenol A epoxy resin</td> <td>25068-38-6</td> <td>V. High</td> </tr> <tr> <td>Aliphatic Glycidyl Ether</td> <td>68609-97-2</td> <td>Low</td> </tr> <tr> <td>m - p - Cresols</td> <td>1319-77-3</td> <td>Low</td> </tr> </tbody> </table> | Name | Cas No. | Proportion | Bisphenol A epoxy resin | 25068-38-6 | V. High | Aliphatic Glycidyl Ether | 68609-97-2 | Low | m - p - Cresols | 1319-77-3 | Low |
| Name | Cas No. | Proportion | | | | | | | | | | | |
| Bisphenol A epoxy resin | 25068-38-6 | V. High | | | | | | | | | | | |
| Aliphatic Glycidyl Ether | 68609-97-2 | Low | | | | | | | | | | | |
| m - p - Cresols | 1319-77-3 | Low | | | | | | | | | | | |
| | V.High >60, High 30 - 60, Med 10 - 29, Low 1 - 9, V.Low <1 | | | | | | | | | | | | |
| | All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS) and National Registration Authority (NRA) approved active constituents. | | | | | | | | | | | | |

| Section 4: | First Aid Measures |
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| | Poison Information Centres in each State capital can provide additional assistance for scheduled poisons. (Phone Australia 131 126) |
| Ingestion: | If swallowed do not induce vomiting. Rinse mouth with water, give glass of |

water and seek medical attention.

Eye contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

Skin contact: Remove contaminated clothing and footwear. Wash skin thoroughly with water. If swelling, redness, blistering or irritation occurs seek medical attention.

Inhalation: Remove victim from exposure to fresh air. If breathing difficulty, artificial respiration and seek medical attention.

Note to Physician: Treat the patient symptomatically.

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| Section 5: | Fire Fighting Measures |
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Extinguishing media: Water, Foam, Dry chemical powder, Carbon dioxide.

Specific Hazards: The material is stable under normal conditions. Hazardous polymerisation can occur on heating. On decomposition gives off carbon dioxide, carbon monoxide and other gases. Incompatible with alkalis, acids and strong oxidizers.

Fire Fighters: Wear positive pressure, self-contained breathing apparatus and full protective clothing.

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| Section 6: | Accidental Release Measures |
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Small Spills: Shut off all possible ignition sources. Wear protective equipment to prevent skin and eye contamination. Clean with absorbent material like sand, soil, vermiculite or any other inert material. Avoid contamination of drains, sewerage and waterways. Collect and seal in properly labelled containers for disposal as per local council statutory codes.

Large Spills: Shut off all possible ignition sources. Wear protective equipment to prevent skin and eye contamination. Clean with absorbent material like sand, soil, vermiculite or any other inert material. Avoid contamination of drains, sewerage and waterways. Collect and seal in properly labelled containers for disposal as per local council statutory codes. If contamination of crops, waterways, drains or sewerage has occurred, advise Emergency Services or State Department of Agriculture.

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| Section 7: | Handling and Storage |
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Storage: Store in the closed, original container in a cool ventilated area. Keep containers tightly closed when not in use. Keep away from explosives, food, oxidising agents and organic peroxides. This product is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

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| Section 8: | Exposure Controls & Personal Protection |
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Exposure Limits: No value assigned for this specific product by the National Occupational and Safety Commission (Worksafe Australia). However, supplier recommended Hygiene Standard as under;

TWA STEL Carcinogen Notices

| Material | TWA | | STEL | | Notices |
|--------------------------|------|-------|------|-------|---------|
| | ppm | mg/m3 | ppm | mg/m3 | |
| Bisphenol A resin | N/E* | N/E* | N/E* | N/E* | - |
| Aliphatic Glycidyl Ether | N/E* | N/E* | N/E* | N/E* | - |
| m-p-cresols | 5 | 22 | N/E* | N/E* | - |

N/E* - No Exposure Standard has been established for this product.

Eng. Controls: Special ventilation is not normally required due to the low volatility of the product at normal temperature. However, in the operation of certain equipment or at elevated temperatures, mists or vapours may be generated and exhaust ventilation should be provided to maintain airborne concentration levels below the exposure standards or where no exposure standard is allocated, as low as reasonably practicable.

Personal Protection: Use overalls, safety shoes, safety goggles, rubber or chemical resistance gloves and respirator if required.

Manufacturing, Packaging & Transport: Avoid skin and eye contact and the inhalation of vapour. Wear overalls, safety goggles and impervious gloves. Available information suggests that the gloves made from PVC should be suitable for intermittent contact. However

due to variations in glove construction and local conditions, the final assessment should be made by the user. If inhalation risk exists, wear organic vapour respirator meeting requirements of AS/NZS 1715 and 1716. Always wash hands with soap and water before smoking, eating, drinking or or using toilet facilities.

Preparations & use of product: Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes and skin. Do not inhale mist or vapours. After each day's use, wash gloves, safety goggles and all the contaminated clothing.

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| Section 9: | Physical & Chemical Properties |
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| Appearance | : Clear liquid |
| Solubility | : Insoluble in water |
| Specific Gravity @ 25 deg. C | 1.12 - 1.16 |
| Boiling Point | : More than 200 deg. C |
| Rel.Vapour Density (air=1) | : 8 |
| Melting Range | : Not established |
| Vapour Pressure (20o C) | : Less than 0.01 Pa |

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|----------------------------------|--------------------------------------|
| Decomposition Temp.(o C) | : More than 200 deg. C |
| Flash Point (o C) | : More than 200 deg. C (ASTM D 93) |
| Flammability Limits (%) | : Not established |
| Ph | : Not applicable |
| Autoignition Temp. (o C) | : Not available |
| % Volatile by Volume | : Nil |

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| Section 10: | Stability & Reactivity |
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Stability: The product is stable under normal conditions and use.

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| Section 11: | Toxicological Information |
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No adverse health effects are expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled are:

Acute Effects: Ingestion: Harmful if swallowed. May cause gastrointestinal discomfort and irritation.

Eye: Brief contact may cause mild irritation to eyes.

Skin: Mild irritant and poorly absorbed through the skin. Prolonged and repeated contact may cause sever irritation and/or dermatitis

Inhaled: Not hazardous at ambient temperatures. Vapours generated at elevated temperatures or when inhaled repeatedly may cause irritation to nose, throat and respiratory tract.

Long Term Effects: Repeated skin contact and inhalation may result in sensitisation in some individuals. May cause allergic reaction, dermatitis or asthma like symptoms. Follow good working practice. Avoid ingestion, inhalation, eye and skin contact. Wash hands with soap and water before eating, drinking, smoking or using toilet facilities.

Acute & Chronic Negative in a battery of mutagenicity assays.

Toxicity: No evidence of carcinogenicity was observed in long term studies of rats. No developmental nor reproductive effects in rat and rabbit. Acceptable Daily Intake (ADI) for humans is 0.01 mg/kg/day.

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| Section 12: | Ecological Information |
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Avoid contamination of drains, sewerage, creeks and waterways.
Not toxic to aquatic organisms

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| Section 13: | Disposal Consideration |
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Dispose all empty containers as per State & Council Regulation. Do not dispose near waterways, vegetation and tree roots. Empty containers and product should not be burned.

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| Section 14: | Transport Information |
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|------------------------|---|-----------------------------------|
| UN. No. | : | Not Applicable |
| Shipping Name | : | Not Applicable |
| Class | : | Not classified as dangerous goods |
| Subsidiary Risk | : | Nil |
| Packaging Group | : | Not Applicable |
| Hazchem Code | : | Not Applicable |
| EPG | : | Not Applicable |
| Segregation | : | Not Applicable |

For road, marine and air transport this product is not classified as dangerous goods within the context of National and International Transport Regulation.

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| Section 15: | Regulatory Information |
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The National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC : 10005 (1999)].

The National Standard for the Storage and Handling of Workplace Dangerous Goods [NOHSC : 1015 (2001)].

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| Section 16: | Other information |
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|----------------------------|---|---------------------|
| Date of Preparation | : | 24.02.11 |
| Date of Revision | : | 24.02.16 |
| Reasons for Issue | : | Five yearly review. |

MSDS's are updated frequently. Please ensure you have the current copy. This MSDS summarises at the date of issue our best knowledge of health and safety hazard information of the product, and in particular how to handle and use the product in the workplace. Since Vivacity Engineering Pty Ltd cannot anticipate or control the conditions under which the product may be used each user must, prior to usage, review this MSDS in the context to use and handling of the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Vivacity Engineering Pty Ltd. Our responsibility for the product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

Approved By: Frank Taylor
Managing Director

Material Safety Data Sheet

| Section 1: | Identification of Product & Supplier |
|-------------------------|---|
| Product: | Megapoxy H Rapid Set - PART B (Use in conjunction with Megapoxy H Rapid Set - Part A) |
| Classification: | Hazardous according to criteria of Worksafe Australia |
| Uses: | Liquid epoxy for civil engineering use. |
| Supplier: | Vivacity Engineering Pty Ltd |
| ABN: | 78 305 545 664 |
| Street Address: | 3 Sefton Road Thornleigh, NSW 2120, Australia |
| Telephone: | 61 2 9875 3044 |
| Facsimile: | 61 2 9875 3665 |
| Emergency Phone: | 61 2 9484 7958 or 0418 112 515 |
| e mail: | info@megapoxy.com |

| Section 2: | Hazards Identification |
|-------------------------|---|
| Hazard Category: | Xn Harmful |
| Risk Phrases: | R20/21/22/ Harmful by inhalation, in contact with skin & if swallowed. R34 Causes burns. R43 May cause sensitisation by skin contact. R52/53 Harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment. |
| D.G. Class: | 8 |
| Subsidiary Risk: | N/A |
| Poison Schedule: | S 5 |
| | This product is a Schedule Poison S 5 and must be stored, maintained and used in accordance with the relevant regulation. |

| Section 3: | Composition & Information on ingredients | | | | | | | | | |
|--|---|------------|---------|------------|---------------------|-----------|------|--|--|----------|
| Ingredients: | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Cas No.</th> <th style="text-align: left;">Proportion</th> </tr> </thead> <tbody> <tr> <td>Cycloaliphaticamine</td> <td>2855-13-2</td> <td>High</td> </tr> <tr> <td>Other ingredients determined not to be hazardous</td> <td></td> <td>To 100 %</td> </tr> </tbody> </table> <p>V.High >60, High 30 - 60, Med 10 - 29, Low 1 - 9, V.Low <1 All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS) and National Registration Authority (NRA) approved active constituents.</p> | Name | Cas No. | Proportion | Cycloaliphaticamine | 2855-13-2 | High | Other ingredients determined not to be hazardous | | To 100 % |
| Name | Cas No. | Proportion | | | | | | | | |
| Cycloaliphaticamine | 2855-13-2 | High | | | | | | | | |
| Other ingredients determined not to be hazardous | | To 100 % | | | | | | | | |

| Section 4: | First Aid Measures |
|---------------------|--|
| | Poison Information Centres in each State capital can provide additional assistance for scheduled poisons. (Phone Australia 131 126) |
| Ingestion: | If swallowed do not induce vomiting. Rinse mouth with water, give glass of water and seek medical attention. |
| Eye contact: | Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance. |

Skin contact: Remove contaminated clothing and footwear. Wash skin thoroughly with water. If swelling, redness, blistering or irritation occurs seek medical attention.

Inhalation: Remove victim from exposure to fresh air. If breathing difficulty, apply artificial respiration and seek medical attention.

Note to Physician: Treat the patient symptomatically.

| | |
|-------------------|-------------------------------|
| Section 5: | Fire Fighting Measures |
|-------------------|-------------------------------|

Extinguishing media: Water, Foam, Dry chemical powder, Carbon dioxide.

Specific Hazards: The material is stable under normal conditions. Hazardous polymerisation can occur on heating. On decomposition gives off carbon dioxide, carbon monoxide, oxides of nitrogen, volatile amines and ammonia. Wear full protective clothing.

Fire Fighters: Wear positive pressure, self-contained breathing apparatus and full protective clothing.

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|-------------------|------------------------------------|
| Section 6: | Accidental Release Measures |
|-------------------|------------------------------------|

Small Spills: Shut off all possible ignition sources. Wear protective equipment to prevent skin and eye contamination. Clean with absorbent material like sand, soil, vermiculite or any other inert material. Avoid contamination of drains, sewerage and waterways. Collect and seal in properly labelled containers for disposal as per local council statutory codes.

Large Spills: Shut off all possible ignition sources. Wear protective equipment to prevent skin and eye contamination. Clean with absorbent material like sand, soil, vermiculite or any other inert material. Avoid contamination of drains, sewerage and waterways. Collect and seal in properly labelled containers for disposal as per local council statutory codes. If contamination of crops, waterways, drains or sewerage has occurred, advise Emergency Services or State Department of Agriculture.

| | |
|-------------------|-----------------------------|
| Section 7: | Handling and Storage |
|-------------------|-----------------------------|

Storage: Store in the closed, original container in a cool ventilated area. Keep containers tightly closed when not in use. Keep away from explosives, food, oxidising agents and organic peroxides. This product is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations. Avoid from physical damage.

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|-------------------|--|
| Section 8: | Exposure Controls & Personal Protection |
|-------------------|--|

Exposure Limits: No value assigned for this specific product by the National Occupational and Safety Commission (Worksafe Australia). However, supplier recommended Hygiene Standard as under;

TWA STEL Carcinogen Notices

| Material | TWA | | STEL | | Notices |
|-------------------|------|-------|------|-------|---------|
| | ppm | mg/m3 | ppm | mg/m3 | |
| Isophoronediamine | N/E* | N/E* | N/E* | N/E* | - |

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

N/E* - No Exposure Standard has been established for this product.

Eng. Controls: Special ventilation is not normally required due to the low volatility of the product at normal temperature. However, in the operation of certain equipment or at elevated temperatures, mists or vapours may be generated and exhaust ventilation should be provided to maintain airborne concentration levels below the exposure standards or where no exposure standard is allocated, as low as reasonably practicable.

Personal Protection: Use overalls, safety shoes, safety goggles, rubber or chemical resistance gloves and respirator if required.

Manufacturing, Packaging & Transport: Avoid skin and eye contact and the inhalation of vapour. Wear overalls, safety goggles and impervious gloves. Available information suggests that the gloves made from PVC should be suitable for intermittent contact. However

due to variations in glove construction and local conditions, the final assessment should be made by the user. If inhalation risk exists, wear organic vapour respirator meeting requirements of AS/NZS 1715 and 1716. Always wash hands with soap and water before smoking, eating, drinking or using toilet facilities.

Preparations & use of product: Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes and skin. Do not inhale mist or vapours. After each day's use, wash gloves, safety goggles and all the contaminated clothing.

| Section 9: | Physical & Chemical Properties |
|-----------------------------------|--|
| Appearance | : Clear - Pale liquid |
| Solubility | : Miscible in water and other solvents. |
| Specific Gravity | : 0.98 - 0.99 @ 25 deg. C |
| Boiling Point | : 247 deg. C @ 25 deg. C |
| Rel.Vapour Density (air=1) | : 7 |
| Melting Range | : Not established |
| Vapour Pressure (20o C) | : Less than 0.01 Pa |
| Decomposition Temp.(o C) | : More than 200 deg. C |
| Flash Point (o C) | : 112 deg. C |
| Flammability Limits (%) | : Upper limit not established. Lower limit 1.2 |
| Ph | : 11.6 (10 g/L water) |
| Autoignition Temp. (o C) | : 380 deg. C |
| % Volatile by Volume | : Nil |

| Section 10: | Stability & Reactivity |
|-------------------|--|
| Stability: | The product is stable under normal conditions and use. |

| Section 11: | Toxicological Information |
|-------------|--|
| | No adverse health effects are expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms |

that may arise if the product is mishandled are:

Acute Effects: Ingestion: Harmful if swallowed. May cause gastrointestinal discomfort and irritation.

Eye: Brief contact may cause burns & irritation to eyes.

Skin: Irritant and poorly absorbed through the skin. Prolonged and repeated contact may cause burns & irritation and/or dermatitis

Inhaled: Not hazardous at ambient temperatures. Vapours generated at elevated temperatures or when inhaled repeatedly may cause irritation to nose, throat and respiratory tract.

Long Term Effects: Repeated skin contact and inhalation may result in sensitisation in some individuals. May cause allergic reaction, dermatitis or asthma like symptoms. Follow good working practice. Avoid ingestion, inhalation, eye and skin contact. Wash hands with soap and water before eating, drinking, smoking or using toilet facilities.

Acute & Chronic Toxicity: Negative in a battery of mutagenicity assays.

No evidence of carcinogenicity was observed in long term studies of rats.

No developmental nor reproductive effects in rat and rabbit.

Acceptable Daily Intake (ADI) for humans is 0.01 mg/kg/day.

| | |
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| Section 12: | Ecological Information |
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Avoid contamination of drains, sewerage, creeks and waterways.
Product may be toxic to some aquatic organisms.

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| Section 13: | Disposal Consideration |
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Dispose all empty containers as per State & Council Regulation. Do not dispose near waterways, vegetation and tree roots. Empty containers and product should not be burned.

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| Section 14: | Transport Information |
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|------------------------|---|------------------|
| UN. No. | : | 2289 |
| Shipping Name | : | Isophorondiamine |
| Class | : | 8 |
| Subsidiary Risk | : | - |
| Packaging Group | : | III |
| Hazchem Code | : | 2X |
| EPG | : | 8A1 or Guide 36 |

For road, marine and air transport this product is classified as corrosive goods within the context of National and International Transport Regulation.

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|--------------------|-------------------------------|
| Section 15: | Regulatory Information |
|--------------------|-------------------------------|

The National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC : 10005 (1999)].

The National Standard for the Storage and Handling of Workplace Dangerous Goods [NOHSC : 1015 (2001)].

| Section 16: | Other information |
|-------------|-------------------|
|-------------|-------------------|

Date of Preparation : 24.02.11

Date of Revision : 24.02.16

Reasons for Issue : Five yearly review

MSDS's are updated frequently. Please ensure you have the current copy. This MSDS summarises at the date of issue our best knowledge of health and safety hazard information of the product, and in particular how to handle and use the product in the workplace. Since Vivacity Engineering Pty Ltd cannot anticipate or control the conditions under which the product may be used each user must, prior to usage, review this MSDS in the context to use and handling of the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Vivacity Engineering Pty Ltd. Our responsibility for the product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

Approved by: Frank Taylor
Managing Director