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RTC Product #79572, 79467, 79478,
79483, 79575, 79576, 79472

MATERIAL SAFETY DATA SHEET

PRODUCT: Q-Tel 2031 Part A

Prepared: 27 May 2014
Supersedes: 11 February 2010

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: Q-Tel 2031 Part A
Chemical Family: Modified Polybutadiene
Product Use: Encapsulant
Manufacturer: Chemque, Inc.
266 Humberline Drive
Rexdale, ON M9W 5X1 CANADA
Telephone Number: (416) 679-5676
In Emergency Only: CANUTEC Collect: (613) 996-6666 (24-hour hotline)
Information: (613) 992-4624

SECTION 2: HAZARDS IDENTIFICATION

This product has been classified and labelled in accordance with EU directives 67/548/EEC and 1999/45/EC and their adaptations and annexes.

Emergency Overview: Clear, amber liquid, mild odour.
May cause eye or skin irritation.

Potential Health Effects: Eyes – May cause moderate irritation.
Skin – May cause minor irritation. May cause skin sensitization in some individuals.
Inhalation – Not expected to be toxic by inhalation.
Ingestion – May cause gastrointestinal discomfort.
Chronic Effects – None known.

SECTION 3: HAZARDOUS INGREDIENT INFORMATION

| Ingredient | % (W/W) | CAS Number | EINEC # | Risk Phrases |
|--|---------|------------------|---------|--------------|
| 1,2-Ethylenediamine, polymer with methyl-oxirane | 5-10 | 25214-63-5 | -- | R36 |
| Non-Hazardous Ingredients | 60-100 | NJTSRN – PFA2031 | | |

See section 15 for further information on EU classification.

SECTION 4: FIRST AID MEASURES

Eyes: Flush open eyes with water for 15 minutes. Seek medical attention if irritation occurs.
Skin: Remove affected clothing. Wash skin with soap and water immediately. Wash contaminated clothing before re-use. Seek medical attention if irritation occurs.
Inhalation: If breathing difficulties occur, remove to fresh air. Seek medical attention.
Ingestion: Drink water to dilute. Seek medical attention if adverse symptoms occur. Never give anything by mouth to an unconscious person.

Safety Data Sheet (SDS)

SECTION 5: FIRE FIGHTING MEASURES

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| Flammable Properties: | Isolate from heat, sparks and open flame. Closed container may pressurize and explode when exposed to extreme heat. |
| Extinguishing Media: | CO ₂ , chemical foam, dry chemical, water spray. |
| Protection of Fire Fighters: | Self contained breathing apparatus and full protective clothing should be worn by fire fighters. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

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| Personal Precautions: | Use personal protective equipment as recommended in Section 8. |
| Environmental Precautions: | Do not empty into drains or discharge into the soil/subsoil. |
| Methods for Containment: | Cover spill with absorbent material. Do not use a combustible material such as sawdust. Place in an open-top container and remove to a ventilated area. Allow to sit in an open container for 24 hours. |
| Methods for Clean-Up: | Decontaminate area with detergent and large amounts of water. Contain contaminated water for disposal and or treatment. |

SECTION 7: HANDLING AND STORAGE

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| General Warning to Prevent Exposure: | Do not breathe fumes or vapours. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. |
| General Storage Information: | Store in tightly-sealed containers in a cool, dry area. Keep away from moisture. Avoid heat, sparks, open flames. |

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

| Ingredient | Exposure Limit | Unit |
|--|--|------|
| 1,2-Ethylenediamine, polymer with methyl-oxirane | Not Established | -- |
| Engineering Controls: | Local exhaust ventilation is recommended if vapours, mists or aerosols are generated. Otherwise, use general exhaust ventilation. | |
| Personal Protective Equipment: | <u>Eyes:</u> Safety glasses with side shields, or goggles; face shield if risk of splashing is present. <u>Skin:</u> Chemical-resistant gloves. Impervious clothing and boots to prevent skin contact. <u>Inhalation:</u> Approved organic respirator if ventilation is inadequate. <u>Other:</u> Eye bath. | |

Safety Data Sheet (SDS)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance: | Clear, amber coloured liquid. |
| Odour: | Mild. |
| Melting Point: | N/E |
| Boiling Point: | N/E |
| Flash Point and Method: | > 93.3 C |
| Evaporation Rate | N/E |
| Upper/Lower Flammable Limits: | N/E |
| Vapour Pressure: | N/E |
| Vapour Density: | N/E |
| Specific Gravity @ 25 C: | 0.96 g/ml |
| Solubility: | Negligible |

SECTION 10: STABILITY AND REACTIVITY

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|--|--|
| Chemical Stability: | Stable |
| Conditions to Avoid: | Moisture, excessive heat |
| Incompatible Materials: | Oxidizers, acids, bases, nitrites, nitrates. |
| Hazardous Decomposition Products: | Carbon dioxide and carbon monoxide. |
| Possibility of Hazardous Reactions: | Will not occur. |

SECTION 11: TOXICOLOGICAL INFORMATION

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|--------------------------------|--|-------------|-----------------------|
| Acute Dose Toxicity: | 1,2-Ethylenediamine, polymer with methyl-oxirane | Oral LD50 | > 3000 mg/kg (rat) |
| | | Dermal LD50 | > 2000 mg/kg (rabbit) |
| Repeated Dose Toxicity: | N/E | | |
| Sensitization: | N/E | | |
| Carcinogenicity: | Product does not contain any carcinogens. | | |
| Neurological Effects: | N/E | | |
| Genetic Effects: | N/E | | |
| Reproductive Effects: | N/E | | |
| Developmental Effects: | N/E | | |
| Target Organ Effects: | N/E | | |

Safety Data Sheet (SDS)

SECTION 12: ECOLOGICAL INFORMATION

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|-------------------------|----------------------------|
| Biodegradability | Not readily biodegradable. |
|-------------------------|----------------------------|

SECTION 13: DISPOSAL CONSIDERATIONS

Recover or recycle if possible.
 Uncured product is hazardous waste. Incinerate in accordance with federal, state, and local environmental controls/regulations. Dispose of cured non-hazardous product in accordance with the same regulations. All provided information only applies to the material as supplied to the user. The characteristics outlined may not apply if the material has been used or otherwise contaminated. It is the responsibility of the user to determine the proper waste identification and disposal methods in compliance with applicable regulations.

SECTION 14: TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT

SECTION 15: REGULATORY INFORMATION

| | |
|------------------------------|---|
| EU Regulations: | Name of material: Q-Tel 2031 Part A Country of Origin: Canada Hazards: Xi –Irritating R36: Irritating to eyes This product has been classified and labelled in accordance with EU directives 67/548/EEC and 1999/45/EC and their adaptations and annexes. |
| US Regulations: | All of the components of this material appear on the “Toxic Substances Control Act” (TSCA) inventory. This product does not contain any 313 listed chemicals. NJTSRN – PFA2031: Non hazardous ingredients |
| Canadian Regulations: | As per WHMIS, this material is classified: D2B All of the components of this material appear on the “Domestic Substances List” (DSL). This product has been classified in accordance with the hazard criteria of the <i>Controlled Products Regulations</i> and the MSDS contains all of the information required in the <i>Controlled Products Regulations</i> . |

Safety Data Sheet (SDS)

SECTION 16: OTHER INFORMATION

Abbreviations: N/E Not established

The conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested method of application and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done at Chemque. All technical assistance and information provided with respect to Chemque's products is subject to Chemque's Terms and Conditions, including the limited warranty therein. Chemque's Terms and Conditions appear on the reverse side of Chemque's credit applications and invoices and are available upon your request. Except as expressly provided in the Terms and Conditions, Chemque excludes all express and implied warranties, representations, conditions and objections, whether statutory or otherwise, concerning the quality of the products of Chemque or their fitness for any particular purpose. It is expressly understood and agreed that the customer assumes and hereby expressly releases Chemque from all liability, in tort, contract, or otherwise, incurred in connection with the use of our products, technical assistance and information. Any statement or recommendation not contained herein is unauthorized and shall not bind Chemque. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.