1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name: 3M SCOTCH-WELD EPOXY ADHESIVE 2216, GREY (PART B)

Synonym(s):
- NSN: 8040-00-145-0432 (PART B)
- NSN: XXXX-00-145-0019 (PART B)
- PRODUCT ID: BMS 5-95 TYICL4

1.2 Uses and uses advised against

Use(s):
- BASE • EPOXY ADHESIVE • EPOXY RESIN SYSTEM • INDUSTRIAL APPLICATIONS • TWO COMPONENT EPOXY SYSTEM

1.3 Details of the supplier of the safety data sheet

Supplier name: 3M AUSTRALIA PTY LIMITED
Address: Building A, 1 Rivett Road, North Ryde, NSW, Australia, 2113
Telephone: 136 136
Fax: (02) 9498 9666
Email: productinfo.au@mmm.com
Website: http://www.3m.com/intl/au/

1.4 Emergency telephone number(s)

Emergency: 1800 097 146

1.5 Details of alternative supplier(s) of the product

Supplier name: 3M NEW ZEALAND
Address: 94 Apollo Drive, Albany, Auckland, 0632
Phone: +64 9 477 4040
Emergency: (Emergency) 0800 764 766
Email: innovation@nz.mmm.com
Website: http://solutions.3mnz.co.nz/wps/portal/3M/en_NZ/World/Wide/

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS Classification(s):
- Skin Corrosion/Irritation: Category 2
- Skin Sensitization: Category 1
- Serious Eye Damage / Eye irritation: Category 2A
- Aquatic Toxicity (Chronic): Category 2

2.2 Label elements

Signal word: WARNING

Pictograms:

Hazard statement(s):
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H411: Toxic to aquatic life with long lasting effects.

Prevention statement(s):
Product name: 3M SCOTCH-WELD EPOXY ADHESIVE 2216, GREY (PART B)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment. This statement does not apply where this is the intended use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response statement(s)
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment is advised - see first aid instructions.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before re-use.
P391 Collect spillage.

Disposal statement(s)
P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other Hazards
No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS number</th>
<th>EC number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL-A-(EPICHLORHYDRIN), REACTION PRODUCT</td>
<td>25068-38-6</td>
<td>500-033-5</td>
<td>70-80%</td>
</tr>
<tr>
<td>KAOLIN</td>
<td>1332-58-7</td>
<td>310-194-1</td>
<td>20-30%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities Eye wash facilities and safety shower are recommended.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to the eyes and skin. May cause sensitisation by skin contact.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture

Combustible. May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition. May evolve aldehydes and ketones when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Seif Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all sources of ignition.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store tightly sealed in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should be bunded and have appropriate fire protection and ventilation systems.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>Reference</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kao lin (Inspirable dust)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Kao lin (Respirable dust)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering Controls
Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE
Eye/Face: Wear splash-proof goggles.
Hand: Wear viton (R) or nitrile gloves.
Body: Wear coveralls. If spraying, with prolonged use, or if in confined areas, wear impervious coveralls.
Respiratory: Where an inhalation risk exists, wear a Type A (Organic vapour) respirator. If sanding dry product, wear a Class P1 (Particulate) respirator. If spraying, with prolonged use, or if in confined areas, wear an Air-line respirator.
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>OFF-WHITE LIQUID</td>
</tr>
<tr>
<td>Odour</td>
<td>SLIGHT EPOXY ODOUR</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>pH</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Melting Point</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt; 121°C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>248°C (cc)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Flammability</td>
<td>CLASS C2 COMBUSTIBLE</td>
</tr>
<tr>
<td>Upper Explosion Limit</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Lower Explosion Limit</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>&lt; 0.1 mm Hg @ 25°C</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>INSOLUBLE</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Oxidising Properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.330</td>
</tr>
</tbody>
</table>

9.2 Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Volatiles</td>
<td>0.06%</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

10.1 Reactivity
Carefully review all information in sections 10.2 to 10.6.

10.2 Chemical stability
Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Hazardous polymerization is not expected to occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources.

10.6 Hazardous decomposition products
May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition. May evolve aldehydes and ketones when heated to decomposition.
11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Health hazard summary
Irritant. This product has the potential to cause adverse health effects with over exposure. Use safe work practices to avoid eye or skin contact and inhalation. Irritating to the eyes and skin. May cause sensitisation by skin contact. The cured product is considered non toxic.

Eye
Irritant. Contact may result in irritation, lacrimation, pain and redness.

Inhalation
Irritant. Over exposure whilst curing may result in irritation of the nose and throat, coughing, possible sensitisation with asthma-like symptoms and pulmonary oedema at high levels.

Skin
Irritant. Contact may result in irritation, redness, rash and dermatitis. May cause sensitisation by skin contact.

Ingestion
May be harmful. Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain and diarrhoea.

Toxicity data
BISPHENOL-A-(EPICHLORHYDRIN), REACTION PRODUCT (25068-38-6)
LD50 (Ingestion): 2 - 19 g/kg (rat)
LD50 (Intraperitoneal): 2.2 g/kg (rat)
LD50 (Skin): > 20 mL/kg (rabbit)

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability
No information provided.

12.3 Bioaccumulative potential
No information provided.

12.4 Mobility in soil
No information provided.

12.5 Results of PBT and vPvB assessment
No information provided.

12.6 Other adverse effects
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Waste disposal
Mix components together (small amounts), absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Ensure protective equipment is worn when mixing. Do not seal containers/tins until reaction is complete. Contact the manufacturer/supplier for additional information (if required). Prevent contamination of drains and waterways as environmental damage may result.

Legislation
Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

14.1 UN number
None Allocated

14.2 UN proper shipping name
None Allocated

Land Transport (ADG)
Sea Transport (IMDG/IMO)
Air Transport (IATA/ICAO)

None Allocated
None Allocated
None Allocated

Reviewed: 16 Jan 2014
Printed: 06 Mar 2015
**Product name**  
3M SCOTCH-WELD EPOXY ADHESIVE 2216, GREY (PART B)

**14.3 Transport hazard classes**

<table>
<thead>
<tr>
<th>DG Class</th>
<th>None Allocated</th>
<th>None Allocated</th>
<th>None Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidiary risk(s)</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
</tbody>
</table>

**14.4 Packing group**

None Allocated

**14.5 Environmental hazards**

None Allocated

**14.6 Special precautions for user**

None Allocated

**Hazchem Code**

None Allocated

---

**15. REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Classified as a Schedule 5 Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

- **N - Dangerous for the environment**
- **Xi - Irritant**

**Risk phrases**

- **R36/38:** Irritating to eyes and skin.
- **R43:** May cause sensitisation by skin contact.
- **R51/53:** Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

**Safety phrases**

- **S2:** Keep out of reach of children.
- **S24/25:** Avoid contact with skin and eyes.
- **S28:** After contact with skin, wash immediately with plenty of water.
- **S37/39:** Wear suitable gloves and eye/face protection.
- **S51:** Use only in well ventilated areas.
- **S61:** Avoid release to the environment. Refer to special instructions/safety data sheets.

**Inventory listing(s)**

AUSTRALIA: AICS (Australian Inventory of Chemical Substances)

All components are listed on AICS, or are exempt.

**15.2 Chemical safety assessment**

No information provided.

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**16. OTHER INFORMATION**

**Additional information**

This product is used in conjunction with 3M Scotch-Weld Epoxy Adhesive 2216, Grey (Part B). Please consult the appropriate ChemAlert report before use.

**WELDING - SANDING - CUTTING DRIED OR CURED PRODUCT:** If sanding, cutting or welding dried or cured product, adverse health effects may be avoided by the use of appropriate engineering controls and/or personal protective equipment. If welding, wear a Class P2 (Metal fume) respirator and depending on the nature of the surface being welded, additional protection (e.g. for organic vapours/acid gas) may also be required. A Class P1 (Particulate) respirator is recommended if dust is generated.

**EPOXY - PHENOXY RESINS AND POLYURETHANES:** Where spray painting with two or more component epoxy resins or polyurethane paints is undertaken, an employee shall wear a air-line respirator, full length chemically resistant coveralls and gloves. Further, if an individual is to enter an enclosed booth where a vapour or gas curing process is occurring, an air-line respirator is required. Once cured, these resins are considered non toxic.

**RESPIRATORS:** In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used...
3M SCOTCH-WELD EPOXY ADHESIVE 2216, GREY (PART B)

and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

COLOUR RATING SYSTEM: RMT has assigned all ChemAlert reports a colour rating of Green, Amber or Red for the sole purpose of providing users with a quick and easy means of determining the hazardous nature of a product. Safe handling recommendations are provided in all ChemAlert reports so as to clearly identify how users can control the hazards and thereby reduce the risk (or likelihood) of adverse effects. As a general guideline, a Green colour rating indicates a low hazard, an Amber colour rating indicates a moderate hazard and a Red colour rating indicates a high hazard.

While all due care has been taken by RMT in the preparation of the Colour Rating System, it is intended as a guide only and RMT does not provide any warranty in relation to the accuracy of the Colour Rating System. As far as is lawfully possible, RMT accepts no liability or responsibility whatsoever for the actions or omissions of any person in reliance on the Colour Rating System.

Abbreviations

ACGIH  American Conference of Governmental Industrial Hygienists
CAS #  Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS    Central Nervous System
EC No.  EC No - European Community Number
EMS    Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS    Globally Harmonized System
GTEPG  Group Text Emergency Procedure Guide
IARC   International Agency for Research on Cancer
LC50   Lethal Concentration, 50% / Median Lethal Concentration
LD50   Lethal Dose, 50% / Median Lethal Dose
mg/m³  Milligrams per Cubic Metre
OEL    Occupational Exposure Limit
PEL    Permissible Exposure Limit
pH     relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm    Parts Per Million
REACH  Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL   Short-Term Exposure Limit
STOT-RE Specific target organ toxicity (repeated exposure)
STOT-SE Specific target organ toxicity (single exposure)
SUSMP  Standard for the Uniform Scheduling of Medicines and Poisons
SWA    Safe Work Australia
TLV    Threshold Limit Value
TWA    Time Weighted Average

Report Status

This ChemAlert report has been independently compiled by RMT’s scientific department utilising the original Safety Data Sheet ("SDS") for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This ChemAlert report does not constitute the manufacturer's original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this ChemAlert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this ChemAlert report.
Product name: 3M SCOTCH-WELD EPOXY ADHESIVE 2216, GREY (PART B)

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Based on SDS dated: 08 Nov 2013

End of Report