Safety Data Sheet

GenFlex Roofing Systems

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier
Product Name: EPDM Water Based Bonding Adhesive

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s): Construction: Adhesive

1.3 Details of the supplier of the safety data sheet
Manufacturer: Firestone Building Products Company
250 West 96th Street
Indianapolis, IN 46260
United States
genflexmsds@bfdp.com

Telephone (General): 800-428-4442

1.4 Emergency telephone number
Manufacturer: (800) 424-9300 - CHEMTREC
Manufacturer: (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture
CLP
- Eye Irritation 2 - H319
- Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335

DSD/DPD
- Irritant (Xi)
- R36/37

2.2 Label Elements
CLP

WARNING

Hazard statements
- H319 - Causes serious eye irritation
- H335 - May cause respiratory irritation

Precautionary statements
Prevention
- P261 - Avoid breathing dust, fume, gas, mist, vapours and/or spray.
- P271 - Use only outdoors or in a well-ventilated area.
- P264 - Wash thoroughly after handling.
According to OSHA 29 CFR 1910.1200 HCS

**P280** - Wear eye/face protection.

**Response**
- **P304+P340** - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- **P312** - Call a POISON CENTER or doctor/physician if you feel unwell.
- **P305+P351+P338** - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P337+P313** - If eye irritation persists: Get medical advice/attention.

**Storage/Disposal**
- **P403+P233** - Store in a well-ventilated place. Keep container tightly closed.
- **P501** - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

**Risk phrases**
- R36/37 - Irritating to eyes and respiratory system.

**Safety phrases**
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other Hazards

**CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

**DSD/DPD**
- According to European Directive 1999/45/EC this preparation is considered dangerous.

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**United States (US)**
According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

**OSHA HCS 2012**
- Eye Irritation 2A - H319
- Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335

2.2 Label elements

**OSHA HCS 2012**

**WARNING**

**Hazard statements**
- Causes serious eye irritation - H319
- May cause respiratory irritation - H335

**Precautionary statements**

**Prevention**
- Avoid breathing dust, fume, gas, mist, vapours and/or spray. - P261
- Wash thoroughly after handling. - P264
- Use only outdoors or in a well-ventilated area. - P271
- Wear eye/face protection ,. - P280

**Response**
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
- Call a POISON CENTER or doctor/physician if you feel unwell. - P312
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
- If eye irritation persists: Get medical advice/attention. - P337+P313

**Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed. - P403+P233
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

**OSHA HCS 2012**
According to WHMIS Standard, this product is considered hazardous.

### 2.1 Classification of the substance or mixture

- Other Toxic Effects - D2B

### 2.2 Label elements

- Other Toxic Effects - D2B

### 2.3 Other hazards

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

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**Section 3 - Composition/Information on Ingredients**

### 3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

### 3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
<th>LD50/LC50</th>
<th>Classifications According to Regulation/Directive</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butadiene Styrene Copolymer</td>
<td>NDA</td>
<td>40% TO 50%</td>
<td>NDA</td>
<td>EU DSD/DPD: Data Lacking&lt;br&gt;EU CLP: Data Lacking&lt;br&gt;OSHA HCS 2012: Data Lacking</td>
<td>NDA</td>
</tr>
<tr>
<td>1,2-Propanediol</td>
<td>CAS:57-55-6&lt;br&gt;EC Number:200-338-0</td>
<td>&lt; 1%</td>
<td>Ingestion/Oral-Rat&lt;br&gt;LD50 • 20 g/kg&lt;br&gt;Skin-Rabbit LD50 • 20800 mg/kg</td>
<td>EU DSD/DPD: Not Classified - Criteria Not Met&lt;br&gt;EU CLP: Not Classified - Criteria Not Met&lt;br&gt;OSHA HCS 2012: Eye Irrit. 2B</td>
<td>NDA</td>
</tr>
</tbody>
</table>

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**Section 4 - First Aid Measures**

### 4.1 Description of first aid measures

**Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

**Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Take off contaminated clothing and
Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Get medical attention and advise the physician of the nature of the material. If ingested, monitor for acidosis and central nervous system changes. Those with kidney history of dysfunction may require special treatment.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media

- Material is non-flammable. Use media appropriate for surrounding materials (e.g., water spray, alcohol foam, or carbon dioxide).

Unsuitable Extinguishing Media

- None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- None known.

Hazardous Combustion Products

- Oxides of carbon.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
- Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Use only with adequate ventilation. Wear respiratory protection. Wear appropriate protective clothing.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stay upwind. Keep out of low areas. Keep unauthorized personnel away. Ventilate closed spaces before entering.

6.2 Environmental precautions

- No special precautions necessary.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk. Absorb liquid on inert material. Transfer to secured container for proper disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal
Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling
- Do not breathe vapors, dust, or spray mist. Use only with adequate ventilation. Avoid contact with eyes. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage
- Do not allow product to freeze. Keep container/package tightly closed in a cool, well-ventilated place.

7.3 Specific end use(s)
- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Exposure Limits/Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Ontario</td>
</tr>
<tr>
<td>1,2-Propanediol (57-55-6)</td>
</tr>
<tr>
<td>TWAs</td>
</tr>
<tr>
<td>10 mg/m3 TWA (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present, aerosol only); 50 ppm TWA (aerosol and vapor); 155 mg/m3 TWA (aerosol and vapor)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering Measures/Controls
- This adhesive is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory
- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.
- Wear splash goggles.

Eye/Face
- Wear appropriate chemical resistant gloves.

Skin/Body
- Wash exposed skin prior to eating, drinking or smoking and at the end of each shift. Wash contaminated clothing prior to reuse.

General Industrial Hygiene Considerations
- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Form</td>
</tr>
<tr>
<td>Color</td>
</tr>
<tr>
<td>Odor Threshold</td>
</tr>
<tr>
<td>Appearance/Description</td>
</tr>
</tbody>
</table>
### Section 10: Stability and Reactivity

#### 10.1 Reactivity
- No dangerous reaction known under conditions of normal use.

#### 10.2 Chemical stability
- Stable under normal temperatures and pressures.

#### 10.3 Possibility of hazardous reactions
- Hazardous polymerization will not occur.

#### 10.4 Conditions to avoid
- Do not allow this product to freeze. Avoid contact with water sensitive materials and strong oxidizers.

#### 10.5 Incompatible materials
- Incompatible Materials: Water sensitive materials

#### 10.6 Hazardous decomposition products
- Burning will produce smoke, carbon monoxide, and carbon dioxide.

### Section 11 - Toxicological Information

#### 11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS</th>
<th>Acute Toxicity:</th>
<th>Irritation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol (&lt; 1%)</td>
<td>57-55-6</td>
<td>oral-rat LD50:20 gm/kg; skin-rat LD50:20800 mg/kg; oral-rat 100 mg MLD; skin-human 500 mg/7D MLD; skin-human 104 mg/3D-1 MOD</td>
<td>eye-rat 100 mg MLD; skin-human 500 mg/7D MLD; skin-human 104 mg/3D-1 MOD</td>
</tr>
<tr>
<td><strong>GHS Properties</strong></td>
<td></td>
<td><strong>Classification</strong></td>
<td></td>
</tr>
<tr>
<td>Acute toxicity</td>
<td></td>
<td>EU/CLP • Classification criteria not met</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA HCS 2012 • Classification criteria not met</td>
<td></td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td></td>
<td>EU/CLP • Classification criteria not met</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA HCS 2012 • Classification criteria not met</td>
<td></td>
</tr>
</tbody>
</table>
Carcinogenicity

- EU/CLP: Classification criteria not met
- OSHA HCS 2012: Classification criteria not met

Germ Cell Mutagenicity

- EU/CLP: Classification criteria not met
- OSHA HCS 2012: Classification criteria not met

Skin corrosion/Irritation

- EU/CLP: Classification criteria not met
- OSHA HCS 2012: Classification criteria not met

Skin sensitization

- EU/CLP: Classification criteria not met
- OSHA HCS 2012: Classification criteria not met

STOT-RE

- EU/CLP: Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
- OSHA HCS 2012: Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

STOT-SE

- EU/CLP: Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
- OSHA HCS 2012: Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

Toxicity for Reproduction

- EU/CLP: Classification criteria not met
- OSHA HCS 2012: Classification criteria not met

Respiratory sensitization

- EU/CLP: Classification criteria not met
- OSHA HCS 2012: Classification criteria not met

Serious eye damage/Irritation

- EU/CLP: Eye Irritation 2
- OSHA HCS 2012: Eye Irritation 2A

Route(s) of entry/exposure

- Inhalation, Skin, Eye, Ingestion/Oral
- Kidney disorders (via accidental ingestion), Pre-existing skin conditions.

Medical Conditions Aggravated by Exposure


Potential Health Effects

Inhalation

- Acute (Immediate)
  - May cause respiratory irritation.
- Chronic (Delayed)
  - No data available.

Skin

- Acute (Immediate)
  - Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)
  - Prolonged or repeated skin contact may cause irritation.

Eye

- Acute (Immediate)
  - Causes serious eye irritation.
- Chronic (Delayed)
  - No data available.

Ingestion

- Acute (Immediate)
  - May cause gastrointestinal irritation and central nervous system depression if accidentally ingested.
- Chronic (Delayed)
  - Lactic acidosis, stupor and seizures from chronic ingestion only.

Carcinogenic Effects

- The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Key to abbreviations

LD = Lethal Dose
MLD = Mild
MOD = Moderate

Section 12 - Ecological Information
12.1 Toxicity
   ● Material data lacking.

12.2 Persistence and degradability
   ● Material data lacking.

12.3 Bioaccumulative potential
   ● Material data lacking.

12.4 Mobility in Soil
   ● Material data lacking.

12.5 Results of PBT and vPvB assessment
   ● No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects
   ● No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods
Product waste
   ● Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste
   ● Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th></th>
<th>14.1 UN number</th>
<th>14.2 UN proper shipping name</th>
<th>14.3 Transport hazard class(es)</th>
<th>14.4 Packing group</th>
<th>14.5 Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>NDA</td>
<td>Not regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td>TDG</td>
<td>NDA</td>
<td>Not regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td>IMO/IMDG</td>
<td>NDA</td>
<td>Not regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
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<tr>
<td>ADN</td>
<td>NDA</td>
<td>Not Regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
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<tr>
<td>ADR/RID</td>
<td>NDA</td>
<td>Not Regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
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<tr>
<td>IATA/ICAO</td>
<td>NDA</td>
<td>Not regulated</td>
<td>NDA</td>
<td>NDA</td>
<td>NDA</td>
</tr>
</tbody>
</table>

14.6 Special precautions for user
   ● None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
   ● Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
SARA Hazard Classifications
   ● Acute
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>MA</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol</td>
<td>57-55-6</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Canada DSL</th>
<th>Canada NDSL</th>
<th>EU EINECS</th>
<th>EU ELNICS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol</td>
<td>57-55-6</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Canada**

**Labor**

*Canada - WHMIS - Classifications of Substances*

- 1,2-Propanediol 57-55-6 Uncontrolled product according to WHMIS classification criteria
- Water 7732-18-5 Uncontrolled product according to WHMIS classification criteria

*Canada - WHMIS - Ingredient Disclosure List*

- 1,2-Propanediol 57-55-6 1%
- Water 7732-18-5 Not Listed

**Environment**

*Canada - CEPA - Priority Substances List*

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

**Europe**

**Other**

*EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification*

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

*EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits*

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

*EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling*

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

*EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations*

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed

*EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases*

- 1,2-Propanediol 57-55-6 Not Listed
- Water 7732-18-5 Not Listed
### United States

#### Labor

**U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

#### Environment

**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

#### United States - California

#### Environment

**U.S. - California - Proposition 65 - Carcinogens List**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - California - Proposition 65 - Developmental Toxicity**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)**

- 1,2-Propanediol  
  - 57-55-6  
  - Not Listed
- Water  
  - 7732-18-5  
  - Not Listed

**U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)**
15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

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Section 16 - Other Information

**Last Revision Date**  
08/May/2014

**Preparation Date**  
25/July/2012

**Disclaimer/Statement of Liability**

- The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Building Products Company, LLC assumes no responsibility for injury to the buyer, the buyer’s employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Building Products Company assumes no responsibility for injury to buyer, the buyer’s employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.

**Key to abbreviations**

NDA = No Data Available