SAFETY DATA SHEET
Markers and Ladders - Group A

Section 1. Identification

Product identifier : Markers and Ladders - Group A

Relevant identified uses of the substance or mixture and uses advised against

Material uses : Analytical reagent.

DNF-362-0003 Small Fragment Diluent Marker, 2.4mL
DNF-363-U100 Small Fragment DNA Ladder, 100uL
DNF-371-0003 HS Small Fragment Diluent Marker, 2.4mL
DNF-372-U100 HS Small Fragment DNA Ladder, 100uL
DNF-373-0003 HS NGS Diluent Marker (1-6000bp), 2.4mL
DNF-373-0001X HS NGS Diluent Marker (1-60000bp), 1.2mL
DNF-374-0003 NGS Diluent Marker (1-6000bp), 2.4mL
DNF-375-0003 HS Genomic DNA Diluent Marker, 2.4mL
DNF-375-0120 HS Genomic DNA Diluent Marker, 120mL
DNF-375-0001X HS Genomic DNA Diluent Marker, 1.2 mL
DNF-376-0003 Genomic DNA Diluent Marker, 2.4mL
DNF-377-U100 HS Genomic DNA Ladder, 100uL
DNF-378-U100 Large Fragment DNA Ladder, 100uL
DNF-379-U100 HS Large Fragment DNA Ladder, 100uL
DNF-393-U100 Genomic DNA Ladder, 100uL
DNF-394-0003 HS NGS Diluent Marker (35-6000bp), 2.4mL
DNF-396-U100 HS NGS DNA Ladder, 100uL
DNF-398-0003 NGS Diluent Marker, 2.4mL
DNF-399-U100 NGS DNA Ladder, 100uL

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture
Not classified.

GHS label elements
Signal word : No signal word.
Hazard statements : No known significant effects or critical hazards.
Precautionary statements
Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.

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Version : 3
Section 2. Hazard(s) identification

Supplemental label elements

Additional warning phrases : Not applicable.

Other hazards which do not result in classification : None known.

Section 3. Composition and ingredient information

Substance/mixture : Mixture

CAS number/other identifiers

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)
Section 5. Firefighting measures

**Extinguishing media**

**Suitable extinguishing media**
Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**
None known.

**Specific hazards arising from the chemical**
In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products**
No specific data.

**Special protective actions for fire-fighters**
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders**
If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions**
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and material for containment and cleaning up**

**Methods for cleaning up**
Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**
Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene**
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Section 8. Exposure controls and personal protection

**Control parameters**

**Occupational exposure limits**

None.

**Appropriate engineering controls**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Appropriate engineering controls, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection**

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.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

**Physical state**

Liquid.

**Colour**

Not available.

**Odour**

Not available.

**Odour threshold**

Not available.

**pH**

8

**Melting point/freezing point**

0°C (32°F)

**Boiling point, initial boiling point, and boiling range**

100°C (212°F)

**Flash point**

Not available.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Closed cup</th>
<th>Open cup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>Edetic acid</td>
<td>&gt;100</td>
<td>&gt;212</td>
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</table>

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Section 9. Physical and chemical properties and safety characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower and upper explosion limit/flammability limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td></td>
</tr>
<tr>
<td>relative vapour density</td>
<td>Not available</td>
</tr>
<tr>
<td>relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td>Miscible with water</td>
<td>Yes</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
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<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Particle characteristics</td>
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<tr>
<td>Median particle size</td>
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</table>

### Vapour Pressure Table

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Vapour Pressure at 20°C (mm Hg)</th>
<th>Vapour Pressure at 50°C (mm Hg)</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>23.8</td>
<td>92.258</td>
<td></td>
</tr>
<tr>
<td>Trometamol</td>
<td>&lt;0.00075006</td>
<td>&lt;0.0001</td>
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</tr>
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</table>

Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>May react or be incompatible with oxidising materials.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

Section 11. Toxicological information

### Acute toxicity
Not available.

### Irritation/Corrosion
Not available.

### Sensitisation
Not available.

### Mutagenicity
Conclusion/Summary: Not available.

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Section 11. Toxicological information

**Carcinogenicity**
- Conclusion/Summary: Not available.

**Reproductive toxicity**
- Conclusion/Summary: Not available.

**Teratogenicity**
- Conclusion/Summary: Not available.

**Specific target organ toxicity (single exposure)**
- Not available.

**Specific target organ toxicity (repeated exposure)**
- Not available.

**Aspiration hazard**
- Not available.

**Information on likely routes of exposure**
- Not available.

**Potential acute health effects**
- **Eye contact**: No known significant effects or critical hazards.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**
- **Eye contact**: No specific data.
- **Inhalation**: No specific data.
- **Skin contact**: No specific data.
- **Ingestion**: No specific data.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Short term exposure**
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

**Long term exposure**
- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

**Potential chronic health effects**
- **General**: No known significant effects or critical hazards.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Reproductive toxicity**: No known significant effects or critical hazards.

**Numerical measures of toxicity**
- **Acute toxicity estimates**: N/A

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Section 12. Ecological information

**Toxicity**
Not available.

**Persistence and degradability**
Not available.

**Bioaccumulative potential**
Not available.

**Mobility in soil**
- **Soil/water partition coefficient (Koc)**: Not available.

**Other adverse effects**: No known significant effects or critical hazards.

Section 13. Disposal considerations

**Disposal methods**
The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

**ADG / IMDG / IATA**
Not regulated as Dangerous Goods according to the ADG Code.

**Special precautions for user**
- **Transport within user's premises**: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments**
Not available.

Section 15. Regulatory information

**Standard for the Uniform Scheduling of Medicines and Poisons**
Not regulated.

**Model Work Health and Safety Regulations - Scheduled Substances**
No listed substance

**International regulations**
- **Chemical Weapon Convention List Schedules I, II & III Chemicals**
  Not listed.
- **Montreal Protocol**
  Not listed.
- **Stockholm Convention on Persistent Organic Pollutants**
  Not listed.

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Section 15. Regulatory information

Rotterdam Convention on Prior Informed Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

Inventory list

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Canada</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>China</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Europe</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Philippines</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>Taiwan</td>
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</tr>
<tr>
<td>Thailand</td>
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</tr>
<tr>
<td>Turkey</td>
<td>All components are listed or exempted.</td>
</tr>
<tr>
<td>United States</td>
<td>All components are active or exempted.</td>
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<tr>
<td>Viet Nam</td>
<td>Not determined.</td>
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</table>

Section 16. Any other relevant information

History

<table>
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<tr>
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</tr>
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</tr>
<tr>
<td>Version</td>
<td>3</td>
</tr>
</tbody>
</table>

Key to abbreviations

- ADG = Australian Dangerous Goods
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- N/A = Not available
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

Procedure used to derive the classification

Classification

Not classified.

References

- Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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