Conforms to Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals

SAFETY DATA SHEET

dsDNA 920 Gel

Section 1. Identification

Product identifier : dsDNA 920 Gel
Part no. : DNF-920-0240, DNF-920-0500

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

Material uses : Analytical reagent.
DNF-920-0240 dsDNA 920 Gel, 240mL
DNF-920-0500 dsDNA 920 Gel, 500mL

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

H360 REPRODUCTIVE TOXICITY (Fertility) - Category 1B
H360 REPRODUCTIVE TOXICITY (Unborn child) - Category 1B

Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 9.5%

GHS label elements

Hazard pictograms :

Signal word : DANGER

Hazard statements : H360 - May damage fertility or the unborn child.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.

Response : P308 + P313 - IF exposed or concerned: Get medical attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

Additional warning phrases : Not applicable.

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Version : 1
Section 2. Hazard(s) identification

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

Section 3. Composition and ingredient information

Substance/mixture: Mixture

CAS number/other identifiers

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>boric acid</td>
<td>≤1</td>
<td>10043-35-3</td>
</tr>
</tbody>
</table>

There are no additional 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. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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: Adverse symptoms may include the following: reduced foetal weight, increase in foetal deaths, skeletal malformations.

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Version: 1
Section 4. First aid measures

**Skin contact**
- Adverse symptoms may include the following:
  - Reduced foetal weight
  - Increase in foetal death
  - Skeletal malformations

**Ingestion**
- Adverse symptoms may include the following:
  - Reduced foetal weight
  - Increase in foetal death
  - Skeletal malformations

**Protection of first-aiders**
- No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**Notes to physician**
- In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments**
- No specific treatment.

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

**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**
- Decomposition products may include the following materials:
  - Carbon dioxide
  - Carbon monoxide
  - Nitrogen oxides
  - Metal oxide/oxides

**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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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".
Section 6. Accidental release measures

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). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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. Store locked up. 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

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>boric acid</td>
<td>ACGIH TLV (United States, 3/2017). TWA: 2 mg/m³ 8 hours. Form: Inhalable fraction STEL: 6 mg/m³ 15 minutes. Form: Inhalable fraction</td>
</tr>
</tbody>
</table>

Appropriate engineering controls: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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
Section 8. Exposure controls and personal protection

**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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**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

**Appearance**

**Physical state**: Liquid.
**Colour**: Not available.
**Odour**: Not available.
**Odour threshold**: Not available.
**pH**: 8.3
**Melting point**: Not available.
**Boiling point**: Not available.
**Flash point**: Not available.
**Evaporation rate**: Not available.
**Flammability (solid, gas)**: Not applicable.
**Lower and upper explosive (flammable) limits**: Not available.
**Vapour pressure**: Not available.
**Vapour density**: Not available.
**Relative density**: Not available.
**Solubility**: Easily soluble in the following materials: cold water and hot water.
**Partition coefficient: n-octanol/water**: Not available.
**Auto-ignition temperature**: Not available.
**Decomposition temperature**: Not available.
**Viscosity**: Not available.
# Section 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>: No specific test data related to reactivity available for this product or its ingredients.</th>
</tr>
</thead>
<tbody>
<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

## Information on toxicological effects

**Acute toxicity**
Not available.

**Irritation/Corrosion**
Not available.

**Sensitisation**
Not available.

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

**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

**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.
Section 11. Toxicological information

Inhalation: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Skin contact: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Ingestion: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

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.
- Teratogenicity: May damage the unborn child.
- Developmental effects: No known significant effects or critical hazards.
- Fertility effects: May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>boric acid</td>
<td>Acute LC50 45.5 mg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia dubia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 133000 μg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 75 mg/l Marine water</td>
<td>Fish - Pago major</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 6000 μg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
</tbody>
</table>

Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>boric acid</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
</tbody>
</table>

Bioaccumulative potential

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Version: 1
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>boric acid</td>
<td>-1.09</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

Soil/water partition coefficient (K<sub>oc</sub>): 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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 Annex II of Marpol and the IBC Code: Not available.

Section 15. Regulatory information

**Standard Uniform Schedule of Medicine 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.
- **Stockholm Convention on Persistent Organic Pollutants**: Not listed.
- **UNECE Aarhus Protocol on POPs and Heavy Metals**: Not listed.
Section 15. Regulatory information

Inventory list

<table>
<thead>
<tr>
<th>Country</th>
<th>Description</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>Not determined.</td>
</tr>
</tbody>
</table>
| Japan            | Japan inventory (ENCS): All components are listed or exempted.  
|                  | Japan inventory (ISHL): Not determined.          |
| Malaysia         | Not determined.                                 |
| New Zealand      | All components are listed or exempted.           |
| Philippines      | All components are listed or exempted.           |
| Republic of Korea| All components are listed or exempted.           |
| Taiwan           | All components are listed or exempted.           |
| Thailand         | Not determined.                                 |
| Turkey           | Not determined.                                 |
| United States    | Not determined.                                 |
| Viet Nam         | Not determined.                                 |

Section 16. Any other relevant information

History

| Date of issue/Date of revision | 08/10/2018 |
| Date of previous issue         | No previous validation |
| Version                        | 1 |

Key to abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG</td>
<td>Australian Dangerous Goods</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimate</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration Factor</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>Intermediate Bulk Container</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LogPow</td>
<td>logarithm of the octanol/water partition coefficient</td>
</tr>
<tr>
<td>NOHSC</td>
<td>National Occupational Health and Safety Commission</td>
</tr>
<tr>
<td>SUSMP</td>
<td>Standard Uniform Schedule of Medicine and Poisons</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
</tbody>
</table>

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repr. 1B, H360 (Fertility)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 1B, H360 (Unborn child)</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

References

Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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