

**Safety Data Sheet**  
**According to Regulation (EU) No. 1907/2006**  
**DPG**

SDS Record Number: CSSS-TCO-010-120950

Printing date: 15/01/2021

Version 1.2

Revision date: 15/01/2021

**1 Identification of the substance and of the company/undertaking**

**1.1 Product identifier:**

Identification on the label/Trade name: DPG  
Additional identification: 1,3-diphenylguanidine  
Identification of the product: CAS#102-06-7; EC#203-002-1  
Index Number: 612-149-00-4  
REACH registration No.: 01-2119519144-47-xxxx

**1.2 Relevant identified uses of the substance and uses advised against:**

**1.2.1 Identified uses:**

Manufacturing of substance (industrial application)  
Production of general rubber goods (GRG)  
Production of tyres (including manufacturing, retreating, service life and end of life)

**1.2.2 Uses advised against:**

Not available.

**1.3 Details of the supplier of the safety data sheet:**

Supplier(Only representative): Chemical Inspection & Regulation Service Limited  
Supplier(Manufacturer): Shandong Sunsine Chemical Co., Ltd.  
Address: Economy & Technical Development Zone, Shanxian City, Shandong Province, China.  
Contact person(E-mail): sale@sunsine.com  
Telephone: +86 530 4686360  
Fax: +86 530 4684121

**1.4 Emergency telephone Number:**

+353 41 980 6916

Available outside office hours?

YES

☐

NO

☒

**2 Hazards Identification**

**2.1 Classification of the substance**

**2.1.1 Classification:**

The substance is classified as following according to REGULATION (EC) No 1272/2008:

| REGULATION (EC) No 1272/2008     |              |
|----------------------------------|--------------|
| Hazard classes/Hazard categories | Hazard codes |
| Acute Tox. 4                     | H302         |
| Skin Irrit. 2                    | H315         |
| Eye Irrit. 2                     | H319         |
| STOT SE 3                        | H335         |

For full text of H- phrases: see section 2.2.

**2.2 label elements**

**Hazard Pictograms:**



**Signal Word(S):**

**Hazard Statement:**

Warning  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H319: Cause serious eye irritation.  
H335: May cause respiratory irritation.  
Chemical Inspection & Regulation Service Limited

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**Precautionary Statement:**

P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301 + P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P302 + P352: IF ON SKIN: Wash with plenty of water.  
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**2.3 Other hazards**

Not available.

**3 Composition/information on ingredients**

**Substance/Mixture:** Substance

**Ingredient(s):**

| Chemical Name  | Registration No.          | CAS No.    | EC No.    | Concentration |
|--|---------------------------|------------|-----------|---------------|
| 1,3-diphenylguanidine                                | 01-2119519144-4<br>7-xxxx | 102-06-7   | 203-002-1 | ≥98           |
| Distillates(petroleum),hydrotreated heavy naphthenic | N/A                       | 64742-52-5 | 265-155-0 | ≤1.5%         |
| Unknown impurity                                     | N/A                       | N/A        | N/A       | ≤0.5%         |

**4 First aid measures**

**4.1 Description of first aid measures:**

***In all cases of doubt, or when symptoms persist, seek medical attention.***

**4.1.1 In case of inhalation:**

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

**4.1.2 In case of skin contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**4.1.3 In case of eyes contact:**

Remove contact lenses. Hold eyelids apart. Flush immediately with water for at least 15 minutes. Seek medical attention.

**4.1.4 In case of ingestion:**

Rinse mouth. Give water to drink. Induce vomiting. Never induce vomiting in unconscious or confused persons. Always seek medical advice.

**4.2 Most important symptoms and effects, both acute and delayed:**

Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Suspected of damaging fertility or the unborn child.

**4.3 Indication of any immediate medical attention and special treatment needed:**

If skin irritation or rash occurs, get medical advice/attention.

**5 Fire-Fighting measures**

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**5.1 Extinguishing media:**

**Suitable extinguishing media:** Carbon dioxide, appropriate foam or dry chemical, water fog.

**Unsuitable extinguishing media:** Not available.

**5.2 Special hazards arising from the substance or mixture:**

Toxic emissions may result if product is involved in a fire.

**5.3 Advice for firefighters:**

Firefighters must wear fire resistant protective equipment. Wear self contained breathing apparatus and protective gloves.

**6 Accidental release measures**

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

**6.1.1 For non-emergency personnel:**

Remove ignition sources. Provide adequate ventilation. Avoid inhalation of vapor or dust.

Avoid skin and eye contact. Wear protective gloves/protective clothing/eye protection/face protection.

**6.1.2 For emergency responders:**

Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

**6.2 Environmental Precautions**

Avoid disposing into drainage/sewer system or directly into the aquatic environment. Keeping away from drains, surface-and ground-water and soil.

**6.3 Methods for Containment and Cleaning up:**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Clean up affected area.

**6.4 Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**7 Handling and storage**

**7.1 Precautions for safe handling:**

**7.1.1 Protective measures:**

Do not breathe dusts/vapor. Handle in well ventilated areas. Eliminate all sources of ignition, and do not generate flames or sparks. Take precautionary measures against static discharges.

**7.1.2 Advice on general occupational hygiene:**

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

**7.2 Conditions for safe storage, including any incompatibilities:**

Store closed containers in a cool, dry, well-ventilated area. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Do not double stack.

**7.3 Specific end use(s):**

Not applicable.

**8 Exposure control/personal protection**

**8.1 Control parameters:**

**8.1.1 Occupational exposure limits:** Not available.

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**8.1.2 Additional exposure limits under the conditions of use:** Not available.

**8.1.3 DNEL/DMEL and PNEC-Values:**

Workers - Hazard via inhalation route-Systemic effects-Long term exposure-DNEL  
(Derived No Effect Level): 1.2 mg/m<sup>3</sup>

Workers - Hazard via dermal route- Systemic effects- Long term exposure- DNEL  
(Derived No Effect Level): 1.7 mg/kg bw/day

General Population - Hazard via inhalation route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 0.3 mg/m<sup>3</sup>

General Population - Hazard via dermal route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 0.85mg/kg bw/day

General Population - Hazard via oral route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 0.085 mg/kg bw/day

Hazard for aquatic organisms- PNEC aqua (freshwater): 30 µg/L

Hazard for aquatic organisms- PNEC aqua (marine water): 3 µg/L

Hazard for aquatic organisms- PNEC aqua (intermittent releases): 14 µg/L

Hazard for aquatic organisms- PNEC STP: 1.47 mg/L

Hazard for aquatic organisms- PNEC sediment (freshwater): 2.51 mg/kg sediment dw

Hazard for aquatic organisms- PNEC sediment (marine water): 0.251 mg/kg sediment dw

Hazard for terrestrial organisms- PNEC soil: 0.404 mg/kg soil dw

**8.2 Exposure controls**

**8.2.1 Appropriate engineering controls:**

Avoid dust generation. Ensure good ventilation and local exhaustion of the working area.

**8.2.2 Individual protection measures, such as personal protective equipment:**

Eye/face protection                      Wear appropriate goggles to prevent eye exposure.

Hand protection                          Wear appropriate gloves to prevent skin exposure.

Body protection                          Wear suitable protective clothing to prevent skin exposure.

Respiratory protection                  Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. Firefighting; use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus.

Thermal hazards                          Wear suitable protective clothing to prevent heat.

**8.2.3 Environmental exposure controls:**

Avoid discharge into the environment.

According to local regulations, Federal and official regulations.

**9 Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

|  |                        |
|--|------------------------|
| Appearance:                                | Granule                |
| Colour:                                    | White or grayish white |
| Odour:                                     | Not available          |
| Odour threshold:                           | Not available          |
| pH:  | Not available          |
| Melting point/range (°C):                  | 149 °C                 |
| Boiling point/range (°C) :                 | 250 °C                 |
| Flash point (°C) :                         | Not available          |
| Evaporation rate:                          | Not applicable         |
| Flammability (solid, gas);                 | Not flammable          |
| Ignition temperature (°C) :                | Not available          |
| Upper/lower flammability/explosive limits: | Not available.         |
| Vapour pressure (25°C) :                   | 4×10 <sup>-9</sup> hPa |
| Vapour density:                            | Not applicable         |

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|                                     |  |
|-------------------------------------|--|
| Relative Density:                   | 0.384  |
| Bulk density (kg/m <sup>3</sup> ) : | Not available                                  |
| Water solubility (g/l) :            | Not available                                  |
| n-Octanol/Water (log Po/w) :        | Log Kow (Pow): 2.42 at 21.1 °C                 |
| Auto-ignition temperature:          | Not available                                  |
| Decomposition temperature:          | Not available                                  |
| Viscosity, dynamic (mPa s) :        | Not determined                                 |
| Explosive properties:               | Not determined                                 |
| Oxidising properties:               | Not applicable                                 |
| Molecular Formula:                  | C <sub>13</sub> H <sub>13</sub> N <sub>3</sub> |
| Molecular Weight:                   | 211.26   |

**9.2. Other information:**

|   |                                |
|---|--------------------------------|
| Fat solubility(solvent– oil to be specified) etc: | Not available                  |
| Surface tension:                                  | 58.8 mN/m at 20°C and 300 mg/L |
| Dissociation constant in water( pKa):             | pKa at 20°C: 10.13             |
| Oxidation-reduction Potential:                    | Not available                  |

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**10 Stability and reactivity**

**10.1 Reactivity:**

The substance is stable under normal storage and handling conditions.

**10.2 Chemical stability:**

Stable at room temperature in closed containers under normal storage and handling conditions.

**10.3 Possibility of hazardous reactions:**

No dangerous reactions known.

**10.4 Conditions to avoid:**

Incompatible materials. Keep away from heat, sparks and flame. Temperatures above 160°C.

**10.5 Incompatible materials:**

Oxidizing agents.

**10.6 Hazardous decomposition products:**

Carbon monoxide. Oxides of nitrogen..

**11 Toxicological information**

**11.1 Toxicokinetics, metabolism and distribution**

**Non-human toxicological data:** Not available

**Method:** Not available

**Dosis:** Not available

**Routes of administration:** Not available

**Results:** Not available

**Absorption:** Not available

**Distribution:** Not available

**Metabolism:** Not available

**Excretion:** Not available

**11.2 Information on toxicological effects**

**Acute toxicity:**

LD50( Oral, Rat): Not available

LD50(Dermal Rabbit): Not available

LD50(Inhalation, Rat): Not available

**Skin corrosion/irritation:** Causes skin irritation.

**Serious eye damage/irritation:** Causes serious eye irritation.

**Respiratory or skin sensitization:** May cause an allergic skin reaction.

**Germ cell mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**reproductive toxicity:** Suspected of damaging fertility or the unborn child.

**STOT- single exposure:** May cause respiratory irritation.

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**STOT-repeated exposure:** Not classified

**Aspiration hazard:** Not classified

## 12 Ecological information

### Toxicity:

| Acute toxicity |         | Time | Species | Method   | Evaluation | Remarks |
|----------------|---------|------|---------|----------|------------|---------|
| LC50           | 4.2mg/l | 96h  | Fish    | OECD 203 | N/A        | N/A     |
| LC50           | 17mg/l  | 48h  | Daphnia | OECD 202 | N/A        | N/A     |
| EC50           | 1.7mg/l | 96h  | Algae   | OECD 201 | N/A        | N/A     |

**Persistence and degradability:** Inherently biodegradable.

**Bioaccumulative potential:** DPG has a low potential for bioaccumulation.

**Mobility in soil:** DPG (1,3-diphenylguanidine) is expected to have very slight mobility based upon an estimated Koc of 5,900.

**Results of PBT&vPvB assessment:** DPG is not PBT nor vPvB.

**Other adverse effects:** Toxic to aquatic life with long lasting effects.

## 13 Disposal considerations

### 13.1 Waste treatment methods

The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

## 14 Transport information

|   | Land transport (ADR/RID) | Sea transport (IMDG) | Air transport (ICAO/IATA) |
|---|--------------------------|----------------------|---------------------------|
| <b>UN-Number:</b>   | Not regulated            | Not regulated        | Not regulated             |
| <b>UN Proper shipping name:</b>   | Not regulated            | Not regulated        | Not regulated             |
| <b>Transport hazard Class:</b>  | Not regulated            | Not regulated        | Not regulated             |
| <b>Packaging group:</b>   | Not regulated            | Not regulated        | Not regulated             |
| <b>Environmental hazards:</b>   | Not regulated            | Not regulated        | Not regulated             |
| <b>Special precautions for user:</b>  | See section 2.2          | See section 2.2      | See section 2.2           |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not regulated            | Not regulated        | Not regulated             |

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**15 Regulation information**

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

**Relevant information regarding authorization:** Not applicable.

**Relevant information regarding restriction:** Not applicable.

**Other EU regulations:** Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

**Other National regulations:** Not applicable

**Chemical Safety Assessment has been carried out?** YES ☐ NO ☒

**16 Other information**

**16.1 Indication of changes** Version 1.2 Amended by EU No 2015/830

**16.2 Training instructions:**

Not applicable.

**16.3 Further information:**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

**16.4 Notice to reader:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.