Based on: GHS (rev 6) (2015).
Hazardous Products Regulations (HPR)
- Canada

| | | |
|---|---|---|
| **Date of issue/ Date of revision** | : | 10/06/2020 |
| **Date of previous issue** | : | 05/22/2017 |
| **Version** | : | 3.0 |

# SAFETY DATA SHEET

**Granular Urea**

## Section 1. Identification

| | | |
|---|---|---|
| **Product identifier** | : | Granular Urea |
| **Product type** | : | Solid (granulates) |
| **Product code** | : | PA385G |

**Uses**

| | | |
|---|---|---|
| **Area of application** | : | |

**Supplier**

| | | |
|---|---|---|
| **Supplier's details** | : | Yara Canada Inc. |

**Address**

| | | |
|---|---|---|
| **Street** | : | 1874 Scarth Street |
| **Number** | : | Ste 1800 |
| **Postal code** | : | S4P 4B3 |
| **City** | : | Regina |
| **Country** | : | Canada |
| **Telephone number** | : | +1 306 525 7600 |
| **Fax no.** | : | +1 306 525 2942 |
| **e-mail address of person responsible for this SDS** | : | yna-hesq@yara.com |
| **Emergency telephone number (with hours of operation)** | : | US: Chemtrec 24-hours Emergency Response: 1-800-424-9300<br>Canada: 24 Hour Emergency service, Canutec 613-996-6666 |

**National advisory body/Poison Center**

| | | |
|---|---|---|
| **Name** | : | Poisons and Drug Information Service |
| **Telephone number** | : | +1 403 944 1414, (800) 332 1414 (Alberta only) |

## Section 2. Hazards identification

| | | |
|---|---|---|
| **Classification of the substance or mixture.** | : | Not classified. |

**GHS label elements**

| | | |
|---|---|---|
| **Signal word** | : | No signal word. |
| **Hazard statements** | : | Not applicable. |

**Precautionary statements**

**General** : Not applicable.

# Section 3. Composition/information on ingredients

**Substance/mixture** : Substance

**CAS number/other identifiers**

**Other means of identification** : Urea
**CAS number** : 57-13-6

| Ingredient name | CAS number | % (w/w) |
|---|---|---|
| Urea | 57-13-6 | >= 90- <100 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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** : Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. Get medical attention if you feel unwell. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Wash with soap and water. Get medical attention if irritation develops.

**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 adverse health effects persist or are severe.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**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. 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.

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

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

**Extinguishing media**

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

**Unsuitable extinguishing media** : None identified.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials: nitrogen oxides, ammonia, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed.

**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.

**Remark** : Non-explosive.

# 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 spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**For emergency responders** : If specialized 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 spilled 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 materials for containment and cleaning up**

**Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of

via a licensed waste disposal contractor.

**Large spill** : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# Section 7. Handling and storage

## Precautions for safe handling

Not for human or animal consumption.

**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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

# Section 8. Exposure controls/personal protection

## Control parameters

**Occupational exposure limits** : None.

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**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** : A washing facility or water for eye and skin cleaning purposes should be present. 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. Wash contaminated clothing before reusing.

**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.

**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. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. |
| **Body protection** | : | Personal protective equipment for the body should be selected based on the task being performed and the risks involved. |
| **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** | : | In case of inadequate ventilation wear respiratory protection. |
| **Personal protective equipment (Pictograms)** | : |  |

# Section 9. Physical and chemical properties

**Appearance**

| | | |
|---|---|---|
| **Physical state** | : | Solid [granulates] |
| **Color** | : | White., |
| **Odor** | : | Odorless. slight, ammoniacal |
| **Odor threshold** | : | Not determined. |
| **pH** | : | 9.5 [Conc.: 100 g/l] |
| **Melting/freezing point** | : | 134 °C |
| **Boiling/condensation point** | : | Not determined. |
| **Sublimation temperature** | : | Not determined. |
| **Flash point** | : | Not applicable |
| **Evaporation rate** | : | Not determined. |
| **Flammability (solid, gas)** | : | Non-flammable. |
| **Lower and upper explosive (flammable) limits** | : | **Lower:** Not determined.<br>**Upper:** Not determined. |
| **Vapor pressure** | : | 0.000016 hPa @ 20 °C (68 °F) |
| **Density** | : | 1.33 g/cm3 |
| **Relative density** | : | Not determined. |
| **Solubility** | : | Easily soluble in the following materials:<br>cold water |
| **Solubility in water** | : | > 100 g/l |

| | | |
|---|---|---|
| **Partition coefficient: n-octanol/water** | : | Not determined. |
| **Auto-ignition temperature** | : | Not determined. |
| **Decomposition temperature** | : | Not determined. |
| **Viscosity** | : | **Dynamic:** Not determined.<br>**Kinematic:** Not determined. |
| **Explosive properties** | : | Non-explosive. |
| **Oxidizing properties** | : | None |

# Section 10. Stability and reactivity

| | | |
|---|---|---|
| **Reactivity** | : | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | : | The product is stable. |
| **Possibility of hazardous reactions** | : | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** | : | Avoid contamination by any source including metals, dust and organic materials. |
| **Incompatible materials** | : | Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. |
| **Remark** | : | Reactive or incompatible with the following materials:<br>Oxidizing agents<br>acids<br>alkalis<br>Nitrites and nitrates |
| **Hazardous decomposition products** | : | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

# Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| Urea | | | | | |
| | OECD 401 LD50 Oral | Rat | 14,300 mg/kg | Not applicable. | IUCLID 5 |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Irritation/Corrosion**

**Conclusion/Summary**

**Skin** : No known significant effects or critical hazards.

**Eyes** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

**Sensitization**

**Conclusion/Summary**

**Skin** : No known significant effects or critical hazards.

**Respiratory** : No known significant effects or critical hazards.

**Mutagenicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Carcinogenicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| Urea | | | | | |
| | Oral | Rat | Negative NOAEL 2,250 mg/kg | Not applicable. | IUCLID 5 |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Reproductive toxicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| Urea | | | | | |
| | Oral | Rat | Developmental-Negative 500 mg/kg | 7 days per week | IUCLID 5 |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Specific target organ toxicity (single exposure)**

No known significant effects or critical hazards.

**Specific target organ toxicity (repeated exposure)**

No known significant effects or critical hazards.

**Aspiration hazard**

No known significant effects or critical hazards.

**Information on the likely routes of exposure:** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**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 and also 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**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| Urea | | | | | |
| | Chronic NOAEL Oral | Rat | 2,250 mg/kg | 12 months 7 days per week | IUCLID 5 |

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Effects on or via lactation** : No known significant effects or critical hazards.

**Other effects** : 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.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Not available.

# Section 12. Ecological information

**Toxicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| Urea | | | | | |
| | Acute LC50 Fresh water | Fish | 6,810 mg/l | 96 h | IUCLID 5 |
| | Acute EC50 Fresh water | Water flea | 10,000 mg/l | 24 h | IUCLID 5 |
| | Chronic NOEC Fresh water | Algae | 47 mg/l | 192 h | IUCLID 5 |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Persistence and degradability**

| Product/ingredient name | Test | Result | Dose | Inoculum | References |
|---|---|---|---|---|---|
| Urea | 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test | 96 % - Inherently biodegradable - 16 d | Not applicable. | Activated sludge | IUCLID |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Bioaccumulative potential**

| Product/ingredient name | LogPow | BCF | Potential |
|---|---|---|---|
| Urea | 1.73 | Not applicable. | low |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Mobility in soil**

**Soil/water partition coefficient (KOC)** : Not available.

**Mobility** : This product may move with surface or groundwater flows because its water solubility is: high

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

## Section 13. Disposal considerations

**Product**

**Methods of disposal** : The generation of waste should be avoided or minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

| Regulation: UN Class | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |

| | |
|---|---|
| **Additional information**<br>**Environmental hazards** : No. | |

| **Regulation: IMDG** | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information**<br>**Marine pollutant** : No. | |

| **Regulation: IATA** | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information**<br>**Marine pollutant** : No. | |

| **Regulation: DOT Classification** | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information**<br>**Marine pollutant** : Not available. | |

| **Regulation: TDG Class** | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information**<br>Not applicable.<br>**Environmental hazards** : No. | |

| | | |
|---|---|---|
| **14.6 Special precautions for user** | : | Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage. |

**IMSBC**

| | | |
|---|---|---|
| **Bulk cargo shipping name** | : | UREA |
| **Class** | : | Not applicable. |
| **Group** | : | C |
| **Marpol V** | : | Non-HME |
| **Transport in bulk according to IMO instruments** | : | Not applicable. |

# Section 15. Regulatory information

**Canadian lists**

| | | |
|---|---|---|
| **Canadian NPRI** | : | None of the components are listed. |
| **CEPA Toxic substances** | : | None of the components are listed. |

**Inventory list**

**Philippines inventory (PICCS):** All components are listed or exempted.
**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
**Korea inventory:** All components are listed or exempted.
**China inventory (IECSC):** All components are listed or exempted.
**Australia inventory (AICS):** All components are listed or exempted.
**Canada inventory:** All components are listed or exempted.
**Taiwan Chemical Substances Inventory (TCSI):** All components are listed or exempted.
**Taiwan Chemical Substances Inventory (TCSI):** All components are listed or exempted.
**United States inventory (TSCA 8b):** All components are listed or exempted.
**EC INVENTORY (EINECS/ELINCS):** All components are listed or exempted.
**Canada:** All components are listed or exempted.

# Section 16. Other information

**Key to abbreviations** :

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
bw = Body weight
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
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SUSMP - Standard Uniform Schedule of Medicine and Poisons
SGG = Segregation Group
UN = United Nations

**Procedure used to derive the classification**

| Classification | Justification |
|---|---|
| Not classified. | Calculation method |

**Key data sources** : EU REACH ECHA/IUCLID5 CSR.
National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.

**History**

**Date of printing** : 10/26/2020
**Date of issue/Date of revision** : 10/06/2020
**Date of previous issue** : 05/22/2017
**Revision comments** : The following sections contain new and updated information: 3.
**Version** : 3.0
**Prepared by** : Yara Chemical Compliance (YCC).

|| Indicates information that has changed from previously issued version.

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