

Conforms: GHS (rev 6) (2015)

(This Safety Data Sheet conforms to the requirements of the Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012.) - United States

**Date of issue/ Date of revision** : 05/20/2020  
**Date of previous issue** : 08/24/2018  
**Version** : 2.0



# SAFETY DATA SHEET

**Turf Royale 21-7-14**

## Section 1. Identification

**GHS product identifier** : Turf Royale 21-7-14  
**Product type** : Solid (prills)  
**Product code** : PH981P

### Uses

**Area of application** : Industrial applications, Professional applications

### Supplier

**Supplier's details** : Yara North America, Inc.

### Address

**Street** : 100 North Tampa Street, Suite 3200  
**Postal code** : 33602  
**City** : TAMPA  
**Country** : United States

**Telephone number** : +1 813 222 5700  
**Fax no.** : +1 813 875 5735  
**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  
Canada: 24 Hour Emergency Service, Canutec 613-996-6666

### National advisory body/Poison Center

**Name** : The National Poisons Emergency number  
**Telephone number** : 1 800 222 1222

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture.** : EYE IRRITATION - Category 2A

### GHS label elements

Hazard pictograms



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

**Precautionary statements**

Prevention : P280-a Wear eye protection.  
P264-a Wash hands thoroughly after handling.

Response : P305 IF IN EYES:  
P351 Rinse cautiously with water for several minutes.  
P338 Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 If eye irritation persists:  
P313-a Get medical attention.

Hazards not otherwise classified : Product forms slippery surface when combined with water.

**Section 3. Composition/information on ingredients**

Substance/mixture : Mixture

Ingredient name	CAS number	%
Ammonium nitrate	6484-52-2	>= 45- <50
Nitric acid potassium salt	7757-79-1	>= 7- <10

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**

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- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. If irritation persists, get medical attention.
- Inhalation** : If inhaled, remove to fresh air. 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** : 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.

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

##### **Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- 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** : Irritating to mouth, throat and stomach.

##### **Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following: pain or irritation, watering, redness
- 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 flooding quantities of water for extinction.
- Unsuitable extinguishing media** : Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.

- Specific hazards arising from the chemical** : The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides and ammonia.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: nitrogen oxides, sulfur oxides, phosphorus oxides, halogenated compounds, metal oxide/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-flammable.
- 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".
- Personal precautions, protective equipment and emergency procedures** : 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).
- 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. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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.

- Precautions for safe handling** : 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. Do not ingest. Avoid contact with eyes, skin and clothing. 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. See also Section 8 for additional information on hygiene measures.
- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. 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. 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. Keep away from: organic materials, oil and grease.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Ammonium nitrate	None.
Nitric acid potassium salt	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.  
**Recommended:** Tightly-fitting goggles,

### 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.

- 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** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Personal protective equipment (Pictograms)** :  

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Solid [prills]
- Color** : Gray.,
- Odor** : Odorless.
- Odor threshold** : Not determined.
- pH** : 4.5 [Conc.: 100 g/l]
- Melting/freezing point** : Decomposes: 160 °C (320 °F)
- Boiling/condensation point** : Not determined.
- Sublimation temperature** : Not determined.
- Flash point** : Not determined.
- Evaporation rate** : Not determined.
- Flammability (solid, gas)** : Non-flammable.
- Lower and upper explosive (flammable) limits** : **Lower:** Not determined.  
**Upper:** Not determined.
- Vapor pressure** : Not determined.
- Bulk density** : 1,000 kg/m<sup>3</sup>
- Relative density** : Not determined.
- Solubility** : Soluble in the following materials:  
cold water
- Partition coefficient: n-octanol/water** : Not determined.
- Auto-ignition temperature** : Not determined.
- Decomposition temperature** : 160 °C (320 °F)
- Viscosity** : **Dynamic:** Not determined.

**Explosive properties** : **Kinematic:** Not determined.  
**Oxidizing properties** : Non-explosive.  
: 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** : alkalis combustible materials, reducing materials, organic materials, Acids

**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
Nitric acid potassium salt					
	LD50 Oral	Rat	2,000 - 5,000 mg/kg	Not applicable.	CSR
	LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.	CSR
Ammonium nitrate					
	OECD 401 LD50 Oral	Rat	2,950 mg/kg	Not applicable.	CSR
	OECD 402 LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.	CSR

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

#### Irritation/Corrosion

Product/ingredient name	Method	Species	Result	Exposure	References
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Nitric acid potassium salt					
	OECD 404 Skin	Rabbit	Non-irritating.		IUCLID 5
Ammonium nitrate					
	OECD 405 Eyes	Rabbit	Irritant		CSR

**Conclusion/Summary**

- Skin** : No known significant effects or critical hazards.
- Eyes** : Causes serious eye irritation.
- Respiratory** : No known significant effects or critical hazards.

**Sensitization**

Product/ingredient name	Method	Species	Result	References
Ammonium nitrate				
	OECD 429 Skin	Mouse	Not sensitizing	

**Conclusion/Summary**

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

**Mutagenicity**

Product/ingredient name	Method	Test detail	Result	References
Ammonium nitrate				
	OECD 473	Mammalian Toxicity - Genotoxicity - In vitro Mammalian Chromosome Aberration Test or Mammalian Bone Marrow Chromosomal Abberation Test or Mammalian Erythrocyte Micronucleus Test In vitro	Negative	CSR
	OECD 471	Bacteria	Negative	IUCLID

In vitro

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

### **Carcinogenicity**

#### **Classification**

Product/ingredient name	OSHA	IARC	NTP
Nitric acid potassium salt	Not applicable.	2A	Not applicable.

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

### **Reproductive toxicity**

Product/ingredient name	Method	Species	Result	Exposure	References
Ammonium nitrate					
	OECD 422 Oral	Rat	Fertility effects- Negative Developmental- Negative NOAEL > 1500 mg/kg bw/day	28 days	CSR

**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** : Causes serious eye irritation.
- 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** : Irritating to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Eye contact** : Adverse symptoms may include the following: pain or irritation, watering, redness
- 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
Ammonium nitrate					
	OECD 422 Chronic NOAEL Oral	Rat	256 mg/kg	28 days	CSR
	OECD 412 Sub-acute NOEC Inhalation	Rat	> 185 mg/m <sup>3</sup>	2 weeks 5 hours per day	CSR

- 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** : Adverse symptoms may include the following: pain or irritation, watering, redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**Numerical measures of toxicity****Acute toxicity estimates**

Route	ATE value
Oral	5,162.1 mg/kg

**Section 12. Ecological information****Toxicity**

Product/ingredient name	Method	Species	Result	Exposure	References
Nitric acid potassium salt					
	OECD 203 Acute LC50 Fresh water	Fish	> 100 mg/l	96 h	CSR
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h	CSR
	Acute EC50 Fresh water	Algae	> 1,700 mg/l	240 h	CSR
Ammonium nitrate					
	Acute LC50 Fresh water	Fish	447 mg/l	48 h	CSR
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h	CSR
	Acute EC50 Salt water	Algae	1,700 mg/l	10 d	CSR

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

**Persistence and degradability**

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

**Bioaccumulative potential**

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

**Mobility in soil**

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

**Mobility** : Not available.

**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. 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 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.
<b>Additional information</b>	
<b><u>Environmental hazards</u></b>	: 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.
<b>Additional information</b>	
<b><u>Marine pollutant</u></b>	: No.

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

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

<b>Regulation: TDG Class</b>	
<b>14.1 UN number</b>	Not regulated.
<b>14.2 UN proper shipping name</b>	Not applicable.
<b>14.3 Transport hazard class(es)</b>	Not applicable.
<b>14.4 Packing group</b>	Not applicable.
<b>14.5 Environmental hazards</b>	No.
<b>Additional information</b>	
Not applicable.	
<b><u>Environmental hazards</u></b>	: 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** : AMMONIUM NITRATE BASED FERTILIZER (non-

Class : hazardous)  
 Not applicable.  
 Group : C  
 Marpol V : Non-HME  
 Transport in bulk according to Annex II of MARPOL and the IBC Code : Not applicable.

## Section 15. Regulatory information

### United States

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

### SARA 311/312

Classification : EYE IRRITATION - Category 2A

#### Composition/information on ingredients

Name	%	Classification
Nitric acid potassium salt	>= 7 - < 10	Fire hazard - Delayed (chronic) health hazard Fire hazard

Ammonium nitrate	>= 45 - < 50	Fire hazard - Immediate (acute) health hazard EYE IRRITATION - Category 2A OXIDIZING SOLIDS - Category 3
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**SARA 313****Form R - Reporting requirements**

Product name	CAS number	%
Phosphoric acid, ammonium salt (1:2)	7783-28-0	>= 1 - < 2
Phosphoric acid, ammonium salt (1:1)	7722-76-1	>= 3 - < 5
Sulfuric acid ammonium salt (1:2)	7783-20-2	>= 7 - < 10
Nitric acid potassium salt	7757-79-1	>= 7 - < 10
Ammonium nitrate	6484-52-2	>= 45 - < 50

**Supplier notification**

Product name	CAS number	%
Phosphoric acid, ammonium salt (1:2)	7783-28-0	>= 1 - < 2
Phosphoric acid, ammonium salt (1:1)	7722-76-1	>= 3 - < 5
Sulfuric acid ammonium salt (1:2)	7783-20-2	>= 7 - < 10
Nitric acid potassium salt	7757-79-1	>= 7 - < 10
Ammonium nitrate	6484-52-2	>= 45 - < 50

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

- Massachusetts** : None of the components are listed.
- New York** : None of the components are listed.
- New Jersey** : The following components are listed:  
Ammonium nitrate  
Nitric acid potassium salt  
Calcium fluoride (CaF<sub>2</sub>)
- Pennsylvania** : The following components are listed:  
Sulfuric acid ammonium salt (1:2)  
Nitric acid potassium salt  
Ammonium nitrate

**California Prop. 65**

**⚠ WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Inventory list**

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**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.  
**Korea inventory:** All components are listed or exempted.  
**Australia inventory (AICS):** All components are listed or exempted.  
**Canada inventory:** 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

### Hazardous Material Information System (U.S.A.)

Health	/	2
Flammability		0
Physical hazards		0

**Caution:** HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

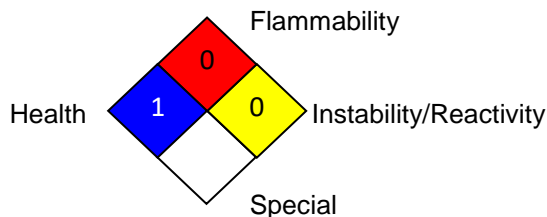
The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

#### Chronic toxicity:

- : No data available.

\* : Carcinogen, Target organs, Reproductive effects, Sensitizer to lungs

### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire,

health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

#### Procedure used to derive the classification

Classification	Justification
EYE IRRITATION - Category 2A	Calculation method

#### History

**Date of printing** : 05/24/2021  
**Date of issue/Date of revision** : 05/20/2020  
**Date of previous issue** : 08/24/2018  
**Revision comments** : The following sections contain new and updated information: 2, 3, 8, 11.

**Version** : 2.0  
**Prepared by** : Yara Chemical Compliance (YCC).  
**Key to abbreviations** : 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  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 SGG = Segregation Group  
 UN = United Nations  
**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.

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

#### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the

accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.