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# SAFETY DATA SHEET

YaraLiva JC30

## Section 1. Identification

Product identifier : YaraLiva JC30  
Product type : Solid  
Product code : PYNB5G

### Uses

Area of application : Professional applications  
Material uses : Fertilizers.

### 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 : yna-hesq@yara.com  
responsible for this SDS

Emergency telephone number : US: Chemtrec 24-hours Emergency Response: 1-800-424-9300  
(with hours of operation) : Canada: 24 Hour Emergency service, CHEMTREC 1-800-424-9300

### Section 1. 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.** : ACUTE TOXICITY (oral) - Category 4  
SERIOUS EYE DAMAGE - Category 1

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H302 Harmful if swallowed.  
H318 Causes serious eye damage.

**Precautionary statements**

**Prevention** : P280 Wear protective gloves and eye protection.  
P270 Do not eat, drink or smoke when using this product.

**Response** : P264-a Wash hands thoroughly after handling.  
P305 IF IN EYES:  
P351 Rinse cautiously with water for several minutes.  
P338 Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P301 IF SWALLOWED:  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 Rinse mouth.

**Additional information** : Product forms slippery surface when combined with water.

### Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	CAS number	% (w/w)
Calcium nitrate	10124-37-5	70 - 80
Ammonium nitrate	6484-52-2	7 - 10

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

**Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual**

concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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

- |                     |   |   |
|---------------------|---|---|
| <b>Eye contact</b>  | : | Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately.  |
| <b>Inhalation</b>   | : | If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. Get medical attention immediately. The exposed person may need to be kept under medical surveillance for 48 hours. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. |
| <b>Skin contact</b> | : | Wash with soap and water. Get medical attention if irritation develops.   |
| <b>Ingestion</b>    | : | 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 you feel unwell.   |

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

#### Potential acute health effects

- |                     |   |  |
|---------------------|---|--|
| <b>Eye contact</b>  | : | Causes serious eye damage.   |
| <b>Inhalation</b>   | : | May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. |
| <b>Skin contact</b> | : | No known significant effects or critical hazards.  |
| <b>Ingestion</b>    | : | Harmful if swallowed. May cause burns to mouth, throat and stomach.  |

#### Over-exposure signs/symptoms

- |                     |   |   |
|---------------------|---|---|
| <b>Eye contact</b>  | : | Adverse symptoms may include the following: pain, watering, redness |
| <b>Inhalation</b>   | : | No specific data.   |
| <b>Skin contact</b> | : | No specific data.   |
| <b>Ingestion</b>    | : | Adverse symptoms may include the following: stomach pains           |

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

- |                            |   |   |
|----------------------------|---|---|
| <b>Notes to physician</b>  | : | 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. |
| <b>Specific treatments</b> | : | No specific treatment.  |

- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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, 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-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. 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.

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. 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 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** : None.

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor 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

**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. 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. Recommended Filter P2

**Personal protective equipment (Pictograms)** :



## Section 9. Physical and chemical properties and safety characteristics

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

### Appearance

<b>Physical state</b>	:	Solid
<b>Color</b>	:	Not determined.
<b>Odor</b>	:	Not determined.
<b>Odor threshold</b>	:	Not determined.
<b>pH</b>	:	Not determined.
<b>Melting point/freezing point</b>	:	Not determined.
<b>Boiling point, initial boiling point, and boiling range</b>	:	Not applicable.
<b>Flash point</b>	:	Not applicable.
<b>Evaporation rate</b>	:	Not determined.
<b>Flammability</b>	:	Non-flammable.
<b>Lower and upper explosion limit/flammability limit</b>	:	<b>Lower:</b> Not applicable. <b>Upper:</b> Not applicable.
<b>Vapor pressure</b>	:	Not determined.
<b>Relative vapor density</b>	:	Not applicable.
<b>Relative density</b>	:	Not determined.
<b>Solubility</b>	:	Partially soluble in the following materials: cold water
<b>Partition coefficient: n-octanol/water</b>	:	Not applicable.
<b>Auto-ignition temperature</b>	:	Not applicable.
<b>Decomposition temperature</b>	:	Not determined.
<b>Viscosity</b>	:	<b>Dynamic:</b> Not determined. <b>Kinematic:</b> Not applicable.
<b>Explosive properties</b>	:	Non-explosive.
<b>Oxidizing properties</b>	:	Non-oxidizer.
<b><u>Particle characteristics</u></b>		
<b>Median particle size</b>	:	Not determined.

## 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
Calcium nitrate				
	OECD 423 LD50 Oral	Rat - Female	500 mg/kg	Not applicable.
	OECD 402 LD50 Dermal	Rat	2,000 - 5,000 mg/kg	Not applicable.
Ammonium nitrate				
	OECD 401 LD50 Oral	Rat	2,950 mg/kg	Not applicable.
	OECD 402 LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.

**Conclusion/Summary** : Harmful if swallowed.

#### Irritation/Corrosion

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate				
	OECD 405 Eyes	Rabbit	Severe irritant	24 - 72 h
Ammonium nitrate				
	OECD 405 Eyes	Rabbit	Irritant	

#### Conclusion/Summary

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



**Eyes** : Causes serious eye damage.

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

#### Sensitization

Product/ingredient name	Method	Species	Result
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
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
	OECD 471	Bacteria In vitro	Negative

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

#### Carcinogenicity

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

#### Reproductive toxicity

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

**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 damage.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. 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** : Harmful if swallowed. May cause burns to mouth, throat and stomach.

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

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

**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
Calcium nitrate				
	OECD 407 Sub-acute NOAEL Oral	Rat	> 1,000 mg/kg	28 days
Ammonium nitrate				
	OECD 422	Rat	256 mg/kg	28 days

	Chronic NOAEL Oral			
	OECD 412 Sub-acute NOEC Inhalation	Rat	> 185 mg/m <sup>3</sup>	2 weeks 5 hours per day

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

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

**Reproductive toxicity** : No known significant effects or critical hazards.

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

#### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following: pain, watering, redness

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : Adverse symptoms may include the following: stomach pains

#### Numerical measures of toxicity

##### Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
YaraLiva JC30	671 mg/kg	3,425.1 mg/kg	N/A	N/A	N/A
Calcium nitrate	500 mg/kg	2,500 mg/kg	N/A	N/A	N/A
Ammonium nitrate	2,950 mg/kg	N/A	N/A	N/A	N/A

## Section 12. Ecological information

#### Toxicity

Product/ingredient name	Method	Species	Result	Exposure
Calcium nitrate	OECD 203 Acute LC50 Fresh water	Fish	1,378 mg/l	96 h
	Acute LC50 Fresh water	Daphnia	490 mg/l	48 h
	Acute EC50 Salt water	Algae	> 1,700 mg/l	10 d
	OECD 209 Chronic NOEC	Activated sludge	180 mg/l	180 min

	Activated sludge			
Ammonium nitrate				
	Acute LC50 Fresh water	Fish	447 mg/l	48 h
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h
	Acute EC50 Salt water	Algae	1,700 mg/l	10 d

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

<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** : CALCIUM NITRATE FERTILIZER  
**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** : The following components are listed: Calcium nitrate  
Ammonium nitrate

**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.

**Japan inventory (CSCL)**: All components are listed or exempted.

**China inventory (IECSC)**: All components are listed or exempted.

**Australia inventory (AIIIC)**: All components are listed or exempted.

**United States inventory (TSCA 8b)**: All components are active 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  
 HPR = Hazardous Products Regulations  
 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)  
 N/A = Not available  
 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**

<b>Classification</b>	<b>Justification</b>
ACUTE TOXICITY (oral) - Category 4	Calculation method
SERIOUS EYE DAMAGE - Category 1	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**

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|| 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.