Product Information Sheet

YaraLiva™ CN-9

NOTE: THIS IS NOT A MATERIAL SAFETY DATA SHEET SINCE NONE IS REQUIRED FOR THIS PRODUCT. IT IS PROVIDED FOR EMPLOYEE INFORMATION ONLY.

Section 1. Chemical product and company identification

Trade name : YaraLiva™ CN-9

Manufacturer : Yara North America, Inc
100 North Tampa Street
Suite 3200
P.O. Box 24926
Tampa, FL 33623
USA
Tel: +1 813 222 5700
Fax: +1 813 875 5735

Validation date : **2009-06-03.**

Print date : 2009-06-03.

In case of emergency : Additional Product Information: 813-222-5700
or Chemtrec 24-hours Emergency Resonse: 1-800-424-9300

Section 2. Hazards identification

Physical state : Liquid. [Clear.]

Emergency overview : CAUTION!

MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

Do not ingest. Wash thoroughly after handling.

Potential acute health effects

Eyes : Slightly irritating to the eyes.

Skin : Slightly irritating to the skin.

Inhalation : Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : Harmful if swallowed.

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

See toxicological information (section 11)

Section 3. Composition/information on ingredients

Name	CAS number	% by weight
No hazardous ingredients.		

Additional information

Contains:

Hydrated Ammonium Calcium Nitrate Double Salt	15245-12-2	
Water		

Section 4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

Section 5. Fire-fighting measures

Flammability of the product : May be combustible at high temperature.

Extinguishing media

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

Products of combustion : These products are
nitrogen oxides
metal oxide/oxides

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : 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. Avoid breathing vapor or mist. 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 for cleaning up

Small spill : Stop leak if without risk. Material free from contamination can be used for its original purpose. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Handling : Avoid contact with eyes, skin and clothing. Avoid breathing vapors, spray or mists.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep away from heat and direct sunlight.

Section 8. Exposure controls/personal protection

Engineering measures : Use only with adequate ventilation. 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.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure eyewash facilities are located close to the working environment.

Personal protection

Eyes : 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 or dusts. Recommended: splash goggles .

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Respiratory : Use a properly fitted, air-purifying or air-fed 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.

Hands : 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. >8 hours (breakthrough time): butyl rubber , natural rubber (latex) , nitrile rubber .

Personal protective equipment (Pictograms) :

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state : Liquid. [Clear.]

Color : Colorless.

Odor : Odorless.

pH : 5 to 5,4

Boiling/condensation point : 104,4°C (219,9°F)

Melting/freezing point	:	-5 to 0°C (23 to 32°F)
Specific gravity	:	1,465
Density (lbs/gal)	:	12.2 (20°C/68°F)
VOC	:	0 % (w/w)

Section 10. Stability and reactivity

Stability and reactivity	:	Stable under recommended storage and handling conditions (see section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Incompatibility with various substances	:	Reactive or incompatible with the following materials: combustible materials, acids and alkalis.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Potential acute health effects

Inhalation	:	Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	:	Harmful if swallowed.
Skin contact	:	Slightly irritating to the skin.
Eye contact	:	Slightly irritating to the eyes.

Product/ingredient name	Result	Species	Dose	Exposure
Preparation	LD50 Oral	Rat	3952 mg/kg	-

Section 12. Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Preparation	-	Acute LC50 >100 mg/L	Fish	96 hours

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Most inorganic compounds are not biodegradable. The product does not show any bioaccumulation phenomena.

Toxicity of the products of biodegradation : The product itself and its products of degradation are not toxic.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Consult your local or regional authorities.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.					

Section 15. Regulatory information

HCS Classification : Not regulated.

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

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

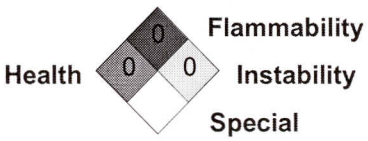
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : **Connecticut Carcinogen Reporting:** None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: None of the components are listed.
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: None of the components are listed.
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: None of the components are listed.
Rhode Island Hazardous Substances: None of the components are listed.

United States inventory (TSCA 8b) : All components are listed or exempted.

Section 16. Other information

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



References : European Chemical Bureau, Annex 1 EU Directive 67/548/EEC
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
Atrion International Inc. 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada

Date of issue : **2009-06-03.**

Date of previous issue : **2008-04-04.**

Version : **3.01**

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information provided in this Product Information Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution. Yara International ASA disclaims any liability for loss or damage resulting from the use of any data, information or recommendations set out in this Product Information Sheet.