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**1. PRODUCT AND COMPANY IDENTIFICATION**

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Product Name:	<b>Heno D™</b>
Manufactured for:	Heartland AG, Inc. P.O. Box 167 407 W. Depot Road Farmer City, IL 61842
Product Use:	Spray Modifier Adjuvant
CAS Number:	Proprietary
Emergency telephone number:	(Chemtrec Information 24 hours) (800) 424-9300
For MSDS, Product Safety or Regulatory inquiries, call:	(800) 323-6280
Customer Service, call:	(847) 596-3001

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**2. HAZARDS IDENTIFICATION**

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Reportable Components: None



May cause irritation if swallowed or contact is made with skin or eyes.

Primary Routes of Exposure:

Ingestion: May cause nausea, vomiting and diarrhea.

Eye Contact: May cause irritation and reddening.

Skin Contact: May cause irritation and reddening.

Inhalation: May cause respiratory and mucosal irritation.

Other Effects: No information was found in connection with medical conditions aggravated by exposure. This product is not a carcinogen by NTP, OSHA and ACGIH.

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**3. COMPOSITION / INFORMATION ON INGREDIENTS**

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Component	CAS Number	Weight %
Mixture	Proprietary	100%

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**4. FIRST AID MEASURES**

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If in Eyes: Check for and remove contact lenses. Immediately flush eyes with water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

If on Skin: Wash affected area with plenty of soap and water. Cold water may be used. Get medical attention if irritation develops.

If Swallowed: **Do not induce vomiting unless directed to do so by medical personnel.** If individual is fully conscious, give a large amount of water to drink. Never give fluids or force vomiting if the individual is unconscious, is having convulsions or has no gag reflex. If large quantities are swallowed, get emergency medical help immediately.

If Inhaled: Move individual to fresh air. If breathing is difficult, give oxygen, or if not breathing, give artificial respiration, and seek emergency medical help immediately.

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**5. FIREFIGHTING MEASURES**

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Suitable Extinguishing media: Water spray, foam, CO<sub>2</sub>, or dry chemicals may be used in areas where this product is stored.

Specific Hazards: None

PPE and Precautions: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

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**6. ACCIDENTAL RELEASE MEASURES**

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In Case of Spill: Evacuate the spill area, except for cleanup personnel. Wear NIOSH/MSHA-approved respirator, full suit, splash goggles, boots and gloves. Control spill with adsorbent pads or booms. Recover free liquid. For recovery or disposal, add inert absorbent (sand, earth, sawdust, etc.) to spill area and shovel into containers for disposal. Product is slippery under foot; flush smooth surfaces thoroughly.

Disposal: Dispose of collected waste in accordance with federal, state and local regulations.

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**7. HANDLING AND STORAGE**

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Keep away from heat, sparks and flame. Keep container closed. Wear appropriate equipment and clothing to prevent repeated or prolonged skin contact as referenced in Section 8 below. Use in areas with adequate mechanical exhaust ventilation, or wear respirator. Product should be stored in a dry place with temperatures above 30°F. Partially used containers should be resealed between uses for maximum storage stability.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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Component Exposure Limits: N/D

Eye/Face Protections: Wear splash-proof chemical safety goggles. Contact lenses should not be worn when working with chemicals.

Skin Protection: Wear chemically impervious gloves, long-sleeved shirt, pants, socks and shoes to minimize skin contact. As precautions, wash hands and face with mild soap and water before eating, drinking, smoking or using restroom. After each shift, clean all protective equipment, wash work clothes, and shower.

Respiratory Protection: Not required under normal use conditions with good ventilation. Protect against spray mists. Respirator recommended in areas of poor ventilation.

General Protection: Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Wash thoroughly after handling product.

Note: When selecting personal protective equipment and clothing, follow all of the manufacturer specifications and recommendations that apply to your specific operation and processing conditions. Take into consideration all working conditions and all chemicals to be handled or processed. Eye wash fountains and drench showers should be located within 100 feet or a 10 second walk or the work area per ANSI Z358.1-1990.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance:	Clear liquid	UEL:	N/D
Odor:	Sweet odor	LEL:	N/D
Odor Threshold:	N/D	Vapor Pressure:	N/D
pH:	4.4–6.5 ± 0.005	Vapor Density:	N/D
Melting Point:	N/D	Relative Density:	9.764 lbs/gallon
Freezing Point:	N/D	Solubility:	Dispersible in water
Boiling Point:	212°F	Partition Coefficient:	N/D
Flash Point:	200°F	Autoignition Temperature:	N/D
Evaporation Rate:	N/D	Decomposition Temperature:	N/D
Flammability:	N/D		

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**10. STABILITY AND REACTIVITY**

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Stability: Stable

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Condition to Avoid: Excessive heat

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Incompatible Materials: Strong bases (alkali) / oxidizers / reactive metals. Do not mix with chlorinated detergents (bleach).

Hazardous Decomposition Products: Burning may produce carbon monoxide, carbon dioxide and unidentified organic compound.

## 11. TOXICOLOGICAL INFORMATION

No toxicological data is available for this product.

## 12. ECOLOGICAL INFORMATION

No ecological data is available for this product.

## 13. DISPOSAL CONSIDERATIONS

Component Waste Numbers: No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions: Dispose of material in compliance with applicable federal, state and local environmental regulations. Recycle or rework material if at all possible. Incinerate material at an approved facility, or treat at an acceptable waste treatment facility or municipal waste treatment plant after proper testing and approval of waste samples.

Container Reuse: An empty container can contain product residue, and should not be reused. If not professionally cleaned and reconditioned, crushing or other means is recommended to prevent unauthorized reuse.

## 14. TRANSPORT INFORMATION

DOT Status (Highway and rail): Not Regulated

IATA Status (Air): Not Regulated

Marine Pollutant: No

## 15. REGULATORY INFORMATION

TSCA: All components of this product are listed under the regulation of the Toxic Substance Control Act.

SARA HAZARD: No

## 16. OTHER INFORMATION

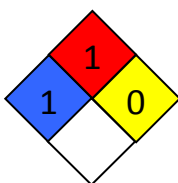
HMIS Hazard Rating

Health: 1

Flammability: 1

Reactivity: 0

Personal Protection: X



Date Prepared: November 13, 2013

Last Updated: November 13, 2013

**WHILE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATE HEREON, HEARTLAND AG. INC., MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.**

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N/R—Not Rated

N/D—Not Determined

N/A—Not Applicable

N/E—Not Established

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.