

## 1. IDENTIFICATION

<b>Product Name:</b>	Agrol <sup>®</sup> 1.7 AO and Agrol <sup>®</sup> 3.0 AO
<b>Synonyms/Generic Names:</b>	Hydroxylated Soybean Oil, Soy-based Polyol
<b>Product Use:</b>	Raw material for the manufacture of polyurethanes.
<b>Restrictions on Use:</b>	None known
<b>Manufacturer:</b>	BioBased Technologies <sup>®</sup> LLC 3333 Pinnacle Hills Parkway, Suite 400, Rogers, Arkansas 72758. Phone: (877) 476-5965, (479) 802-6475, Fax: (479) 250-9976 Website: <a href="http://www.biobasedtechnologies.com">http://www.biobasedtechnologies.com</a>
<b>In Case Of Emergency Call:</b>	CHEMTREC (800) 424-9300 (24 Hours/Day, 7 Days/Week, US & Canada) or call (collect) at (703) 527-3887 (USA)

## 2. HAZARD(S) IDENTIFICATION

Please see Section 3 and 15 for country specific classification information, and Section 11 for additional details.

### Hazard Classification according to 29 CFR 1910.1200

#### Classification of Substance or Mixture

Eye Damage/Irritation

Category 2B

H320

#### Labeling

##### Pictograms

No Pictogram Required

##### Signal Word

WARNING

##### Hazard Statements

H320 – Causes eye irritation

##### Precautionary Statements

Wash hands thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

##### Hazards Not Otherwise Classified

None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Weight %	GHS Classification
Hydroxylated Soybean Oil	693217-63-9	98	H320

Trace impurities and additional material names not listed above may appear in Section 15 of this MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

## 4. FIRST AID MEASURES

#### Symptoms/Effects

**Skin:** Remove contaminated clothing. Wash with soap and water.

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<b>Eyes:</b>	Immediately flush eyes with water while lifting the eyelids and continue for several minutes. Get medical attention if irritation develops.
<b>Inhalation:</b>	Move the exposed person to fresh air. If irritation persists, consult a physician.
<b>Ingestion:</b>	If discomfort develops, consult a physician or poison control center. Do not induce vomiting unless directed to do so by a physician.
<b>Most Important Effects</b>	
<b>Acute:</b>	May be irritating to eyes.
<b>Delayed:</b>	No long-term effects are expected.
<b>Advice to Physician</b>	
	Product is of low toxicity. Treat symptomatically.

### **5. FIRE-FIGHTING MEASURES**

#### **Flammable Properties**

<b>Suitable Extinguishing Media:</b>	Water fog, foam, dry chemical, carbon dioxide or water spray.
<b>Unsuitable Extinguishing Media:</b>	Avoid solid stream of water if liquid is heated to ignition. It may spread burning liquid.
<b>Unusual Fire And Explosion Hazards:</b>	Sealed containers can rupture violently when exposed to fire. Decomposition products may include the following materials: Carbon dioxide Carbon monoxide
<b>Special Fire Fighting Precautions/Instructions:</b>	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

### **6. ACCIDENTAL RELEASE MEASURES**

<b>Emergency Procedures:</b>	Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away.
<b>Personal Precautions:</b>	Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Do not touch or walk through spilled material.
<b>Protective Equipment:</b>	Wear suitable personal protective equipment including hand and eye/face protection and suitable clothing for the task being performed.
<b>Environmental Precautions and Clean Up Methods:</b>	(See Section 8 for recommended personal protective equipment.) Small spills: Soak up with absorbent material such as oil-dry or vermiculite. Place into containers but DO NOT seal them. Arrange for disposal. Large spills: Dike spill and pump into suitable containers for disposal. Do not allow to enter natural waterways or sewers. Ventilate area during cleanup.

**Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.**

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### 7. HANDLING AND STORAGE

<b>Normal Handling:</b>	Avoid contact with skin and eyes. Do not breathe product mists if formed. (See Section 8 for recommended personal protective equipment.)
<b>Storage Recommendations:</b>	Keep containers closed during storage. Store away from moisture, isocyanates and oxidizing agents. (See Section 10 for hazards associated with contamination.) Do not roll drums. Move drums with fork lifts equipped with “parrot beaks” or drum clamps. Product life is approximately 360 days when stored between 50 & 120 °F (10 & 50 °C) under an inert atmosphere such as nitrogen. Do not allow product to become contaminated with other materials.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls:</b>	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations including transfer of liquids.
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#### Personal Protective Equipment

<b>Skin Protection:</b>	Wear rubber or neoprene gloves and long-sleeved shirt. A rubber apron is recommended for liquid transfer operations.
<b>Eye Protection:</b>	Wear safety glasses with eye-shields or chemical safety goggles. Avoid the use of contact lenses for liquid transfer and handling operation.
<b>Respiratory Protection:</b>	Not required for properly ventilated areas. For areas containing product mists, use an air purifying respirator equipped with an organic vapor cartridge
<b>Additional Recommendations:</b>	A source of running water such as a safety shower and/or eyewash station is recommended in the work area.

#### Exposure Guidelines

Ingredient	ACGIH TLV	OSHA PEL	Other Limit
Hydroxylated soybean oil	None established	None established	None established

<sup>1</sup> = Limit established by BioBased Technologies<sup>®</sup>.

<sup>2</sup> = Workplace Environmental Exposure Level (AIHA).

<sup>3</sup> = Biological Exposure Index (ACGIH).

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Slight yellow to amber viscous liquid	
<b>Physical State:</b>	Liquid	
<b>Odor:</b>	Slight	
<b>Odor Threshold:</b>	Not Determined	
<b>Partition Coefficient: n-octanol/water</b>	Not Determined	
<b>Relative Density (water = 1.0):</b>	0.95 – 1.1 @ 77 °F (25 °C)	
<b>Solubility In Water (weight %):</b>	< 0.004 @ 77 °F (25 °C)	
<b>pH:</b>	5.3 – 6.3 (50% dilutions with titration fluid)	
<b>Boiling Point:</b>	560 - 580 °F (293 - 304 °C)	
<b>Freezing Point:</b>	34 - 45 °F (1 - 7 °C)	
<b>Viscosity</b>	100 – 1,000 cP @ 77 °F (25 °C)	
<b>Vapor Pressure:</b>	0.17 mm Hg @ 175 °F (79.4 °C)	
<b>Vapor Density (air = 1.0):</b>	17.69	
<b>Evaporation Rate:</b>	Not determined	<b>Compared To:</b>
<b>Flammability</b>	Not determined	

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<b>% Volatiles:</b>	Not determined
<b>Flash Point:</b>	>200 °F (> 93.3 °C) Pensky Martin Closed Cup
<b>Autoignition Temperature:</b>	797 °F (425 °C)
<b>Upper Flame Limit (volume % in air):</b>	Not determined
<b>Lower Flame Limit (volume % in air):</b>	Not determined
<b>Decomposition Temperature</b>	Not determined

### **10. STABILITY AND REACTIVITY**

<b>Reactivity:</b>	Stable under normal storage conditions.
<b>Conditions to Avoid:</b>	Heat, flames and sparks. Take precautionary measures against static charges and avoid exposure to light.
<b>Incompatibilities:</b>	Acids – may react with product. Oxidizing agents – may ignite product. Isocyanates and moisture – contamination can cause a reaction and an increase in pressure. Contaminated product should never be placed in a sealed container. Never attempt to open a bulging drum. Contact BioBased Technologies <sup>®</sup> if this occurs.
<b>Hazardous Decomposition Products:</b>	Carbon monoxide, carbon dioxide and organic residues
<b>Hazardous Polymerization:</b>	Will not occur.

### **11. TOXICOLOGICAL INFORMATION**

<b>Routes of Exposure</b>	
<b>Skin:</b>	No effects anticipated.
<b>Eyes:</b>	Can cause irritation.
<b>Inhalation:</b>	Inhalation of product mists may be mildly irritating.
<b>Ingestion:</b>	Ingestion of large quantities may cause digestive distress (irritation, nausea, diarrhea)
<b>Immediate Effects:</b>	May cause eye irritation
<b>Delayed Effects:</b>	No delayed effects are known
<b>Acute Toxicity:</b>	LD <sub>50</sub> , oral, rat > 2,000 mg/kg
<b>Eye Irritation:</b>	Moderately irritating
<b>Skin Irritation:</b>	Slightly irritating
<b>Skin Sensitization</b>	Not sensitizing
<b>Chronic Toxicity:</b>	Not expected to cause chronic toxicity effects
<b>Mutagenicity</b>	Negative

<b>Carcinogenicity</b>			
<b>Ingredient Name</b>	<b>NTP Status</b>	<b>IARC Status</b>	<b>OSHA List</b>
No ingredients listed in this section	----	----	----

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### 12. ECOLOGICAL INFORMATION

Low acute toxicity to aquatic organisms	
<b>Acute Toxicity:</b>	Hydroxylated Soybean Oil
<b>Aquatic Invertebrates</b>	EC50 48 h > 100 mg/L Daphnia magna
	NOEC 48h 100 mg/L Daphnia magna
<b>Aquatic Plants</b>	IC50 96h > 100 mg/L Selenastrum capricornutum
	NOEC 96h 12.5 mg/L Selenastrum capricornutum
<b>Persistence and Degradability</b>	
<b>Degradability</b>	This product is more than 80% biodegradable
<b>Bioaccumulation Potential</b>	
<b>Partition Coefficient</b>	log Pow ~3.82
<b>Mobility in Soil</b>	
<b>Mobility</b>	This product has poor water solubility
<b>PBT and vPvB Assessment</b>	
Not classified as PBT or vPvB	
<b>Other Adverse Effects</b>	
Not Determined	

### 13. DISPOSAL CONSIDERATIONS

#### **RCRA**

<b>Is the unused product a RCRA hazardous waste if discarded?</b>	No
<b>If yes, the RCRA ID number is:</b>	-----

The information offered in Section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

<b>Other Disposal Considerations:</b>	Liquid product should be incinerated in a licensed facility in accordance with local, state and federal regulations. Do not discharge to waterways or sewer systems or dispose of on the ground. <b>Under no circumstances should a torch, welder, plasma cutter or similar tool capable of producing an arc be used on an empty container regardless of the whether the container has been rinsed or cleaned.</b> Containers should be punctured with a non-sparking tool and disposed of in a licensed facility or landfill.
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### 14. TRANSPORT INFORMATION

<b>Shipping Name:</b>	Not Regulated for Transport (Hydroxylated soybean oil)
<b>US DOT Hazard Class:</b>	Not regulated
<b>Canadian TDG Hazard Class:</b>	Not regulated
<b>IMDG Hazard Class (sea):</b>	Not regulated
<b>IATA Hazard Class (air):</b>	Not regulated

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## 15. REGULATORY INFORMATION

### Toxic Substances Control Act (TSCA)

<b>TSCA Inventory Status:</b>	Listed on TSCA Chemical Inventory
<b>Listings in other TSCA Sections:</b>	None

### SARA Title III/CERCLA

\_\_\_ "Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<b>Ingredient</b>	<b>SARA/CERCLA RQ (lb)</b>	<b>SARA EHS TPQ (lb)</b>
No ingredients listed in this section.	----	----

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

**SARA 311 Hazard Class:** Immediate

### SARA 313 Toxic Chemicals:

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

<b>Ingredient</b>	<b>Comment</b>
No ingredients listed in this section.	


### State Right-To-Know

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<b>Ingredient</b>	<b>CAS #</b>	<b>Weight %</b>	<b>NJ</b>	<b>PA</b>	<b>MA</b>
No ingredients listed in this section.					

<b>Additional Regulatory Information:</b>	None
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### Non-US Regulatory Information.

<b>CANADIAN REGULATIONS:</b>		
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation and the MSDS contains all information required by the Controlled Products Regulation.		
<b>WHMIS Classification: (Canada)</b>	D-2B Material causing other toxic effects (Toxic)	
<b>Canadian Inventory Status (DSL)</b>	This product is listed on the Canadian DSL inventory.	

## 16. OTHER INFORMATION

<b>Current Issue Date:</b>	March 22, 2015
<b>Previous Issue Date:</b>	August 30, 2012
<b>Changes from previous Issue Date:</b>	New HCS2012 Compliant Format
<b>Other Product Information:</b>	None

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### Hazard Ratings

<b>HMIS (III)</b>	<b>NFPA</b>
Health – 1	Health – 1
Flammability – 1	Flammability – 1
Physical Hazard – 0	Instability – 0

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