

1. IDENTIFICATION

Product Name:	Agrol® Polyol – All Grades 2.0 – 5.6 (e.g., 2.0, 3.6, 4.0, 5.6, etc)
Synonyms/Generic Names:	Hydroxylated Soybean Oil, Soy-based Polyol
Product Use:	Raw material for the manufacture of polyurethanes.
Restrictions on Use:	None known
Manufacturer:	BioBased Technologies® LLC 3333 Pinnacle Hills Parkway, Suite 400, Rogers, Arkansas 72758. Phone: (877) 476-5965, (479) 802-6475, Fax: (479) 250-9976 Website: http://www.biobasedtechnologies.com
In Case Of Emergency Call:	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	100	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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Eyes:	Immediately flush eyes with water while lifting the eyelids and continue for several minutes. Get medical attention if irritation develops.
Inhalation:	Move the exposed person to fresh air. If irritation persists, consult a physician.
Ingestion:	If discomfort develops, consult a physician or poison control center. Do not induce vomiting unless directed to do so by a physician.
Most Important Effects	
Acute:	May be irritating to eyes.
Delayed:	No long-term effects are expected.
Advice to Physician	
	Product is of low toxicity. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties

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

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away.
Personal Precautions:	Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Do not touch or walk through spilled material.
Protective Equipment:	Wear suitable personal protective equipment including hand and eye/face protection and suitable clothing for the task being performed.
Environmental Precautions and Clean Up Methods:	(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

Normal Handling:	Avoid contact with skin and eyes. Do not breathe product mists if formed. (See Section 8 for recommended personal protective equipment.)
Storage Recommendations:	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

Engineering Controls:	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

Skin Protection:	Wear rubber or neoprene gloves and long-sleeved shirt. A rubber apron is recommended for liquid transfer operations.
Eye Protection:	Wear safety glasses with eye-shields or chemical safety goggles. Avoid the use of contact lenses for liquid transfer and handling operation.
Respiratory Protection:	Not required for properly ventilated areas. For areas containing product mists, use an air purifying respirator equipped with an organic vapor cartridge
Additional Recommendations:	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

¹ = Limit established by BioBased Technologies®.

² = Workplace Environmental Exposure Level (AIHA).

³ = Biological Exposure Index (ACGIH).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Slight yellow to amber viscous liquid	
Physical State:	Liquid	
Odor:	Slight	
Odor Threshold:	Not Determined	
Partition Coefficient: n-octanol/water	Log 3.82	
Relative Density (water = 1.0):	0.95 – 1.1 @ 77 °F (25 °C)	
Solubility In Water (weight %):	< 0.004 @ 77 °F (25 °C)	
pH:	5.3 – 6.3 (50% dilutions with titration fluid)	
Boiling Point:	560 - 580 °F (293 - 304 °C)	
Freezing Point:	34 - 45 °F (1 - 7 °C)	
Viscosity	100 – 6,000 cP @ 77 °F (25 °C)	
Vapor Pressure:	0.17 mm Hg @ 175 °F (79.4 °C)	
Vapor Density (air = 1.0):	17.69	
Evaporation Rate:	Not determined	Compared To:
Flammability	Not determined	

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

10. STABILITY AND REACTIVITY

Reactivity:	Stable under normal storage conditions.
Conditions to Avoid:	Heat, flames and sparks. Take precautionary measures against static charges and avoid exposure to light.
Incompatibilities:	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® if this occurs.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide and organic residues
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

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

Carcinogenicity	NTP Status	IARC Status	OSHA List
Ingredient Name			
No ingredients listed in this section	----	----	----

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12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

RCRA

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

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.

Other Disposal Considerations:	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. 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. 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

Shipping Name:	Not Regulated for Transport (Hydroxylated Soybean Oil)
US DOT Hazard Class:	Not regulated
Canadian TDG Hazard Class:	Not regulated
IMDG Hazard Class (sea):	Not regulated
IATA Hazard Class (air):	Not regulated

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15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

TSCA Inventory Status:	Listed on TSCA Chemical Inventory
Listings in other TSCA Sections:	None

SARA Title III/CERCLA

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

Ingredient	SARA/CERCLA RQ (lb)	SARA EHS TPQ (lb)
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.

Ingredient	Comment
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.

Ingredient	CAS #	Weight %	NJ	PA	MA
No ingredients listed in this section.					

Additional Regulatory Information:	None
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Non-US Regulatory Information.

CANADIAN REGULATIONS:	
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.	
WHMIS Classification: (Canada)	D-2B Material causing other toxic effects (Toxic) 
Canadian Inventory Status (DSL)	This product is listed on the Canadian DSL inventory

16. OTHER INFORMATION

Current Issue Date:	May 19, 2015
Previous Issue Date:	December 3, 2013
Changes from previous Issue Date:	New HCS2012 Compliant Format
Other Product Information:	None

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Hazard Ratings

HMIS (III)	NFPA
Health – 1	Health – 1
Flammability – 1	Flammability – 1
Physical Hazard – 0	Instability – 0

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