

Agrol® Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Agrol® Polyol – All Grades 2.0 – 7.0 (e.g., 2.0, 3.6, 4.3, 5.6, 7.0, etc)
Synonyms/Generic Names:	Hydroxylated Soybean Oil, Soy-based Polyol
Product Use:	Raw material for the manufacture of polyurethanes.
Manufacturer:	BioBased Technologies LLC® 1200 Stewart Place, Springdale, AR 72764 Phone: (877) 476-5965, (479) 966-4600 Fax: (479) 966-4601 Website: www.biobasedtech.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. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A pale yellow to amber, viscous liquid. Can cause eye irritation. Product can be ignited but its flash point is above 200 °F (93.3 °C).

Potential Health Hazards:

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)
Delayed Effects:	None

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS Number	Weight %
Hydroxylated Soybean Oil	693217-63-9	~ 99

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

Skin:	Remove contaminated clothing. Wash with soap and water.
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.
Advice to Physician:	Product is of low toxicity. Treat symptomatically.

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5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point (and method)	>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
Flame Propagation Rate (solids):	Not applicable
OSHA Flammability Class: (storage)	IIIB

Extinguishing Media:	Water fog, foam, dry chemical, carbon dioxide or water spray. 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.
Special Fire Fighting Precautions/Instructions:	Wear self contained breathing apparatus. Avoid eye contact with liquid.

6. ACCIDENTAL RELEASE MEASURES

In Case Of Spill or Other Release:	(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.
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Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

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.
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	A source of running water such as a safety shower and/or eyewash station is

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Recommendations: 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		
Specific Gravity (water = 1.0):	0.97 – 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 – 35,000 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:	
% Volatiles:	Not determined		
Flash Point:	>200 °F (> 93.3 °C) Pensky Martin Closed Cup		

10. STABILITY AND REACTIVITY

Normally Stable:	Stable under normal storage conditions.
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

Acute Toxicity:	LD ₅₀ , oral, rat > 5,000 mg/kg LC ₅₀ , rat, 4 hour - No deaths. Product was tested at maximum achievable airborne concentration. As product is extremely viscous, no actual concentration measurement could be taken of the amount of product suspended in the air stream.
Eye Irritation:	Causes eye irritation. .
Skin Irritation:	Not an irritant. Based upon two years of handling experience at the manufacturer's facility.
Chronic data:	No data available.

12. ECOLOGICAL INFORMATION

No data currently available. Avoid contact with natural waterways and soils.

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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:	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

15. REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

TSCA Inventory Status:	Listed on TSCA Chemical Inventory
Other TSCA Issues:	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	Weight %	Comment
No ingredients listed in this section.		

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Additional Regulatory Information:	None
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Non-US Regulatory Information.

WHMIS Classification: (Canada)	D2B. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
Other Chemical Inventory Status:	This product is listed on Canadian DSL inventory list.

16. OTHER INFORMATION

Current Issue Date:	March 17, 2011
Previous Issue Date:	December 07, 2010
Changes from previous Issue Date:	DSL listing
Other Product Information:	None

Hazard Ratings

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

The technical data contained herein is true and accurate to the best of BioBased Technologies LLC's[®] knowledge on the date of publication. The technical data is subject to change, however, and the user should contact BioBased Technologies LLC[®] to verify that the technical data is current. In addition, the technical data is provided for your guidance only. Because many factors can affect the processing or application of the product and/or its use, it is the user's responsibility to test the product to determine its suitability for the user's intended use. The sale and use of this product is subject to all of the terms and conditions set forth in the BioBased Technologies LLC[®] sales order, including the LIMITED WARRANTY, DISCLAIMER OF WARRANTY AND RELEASE, and EXCLUSION OF CONSEQUENTIAL AND OTHER DAMAGES. This technical data does not create an express warranty of any kind. The only warranty applicable to this product is the written, limited express warranty contained in the BioBased Technologies LLC[®] sales order, which is extended to the purchaser only.