

Safety Data Sheet

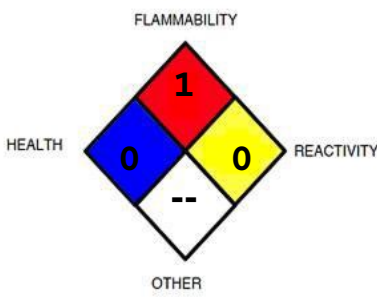
Section 1: Product & Company Identification

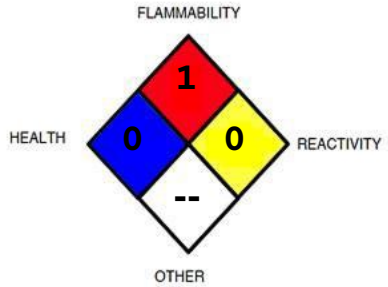
Product Name:	Betulinic Acid
Product #:	B-1191
Synonyms:	3 -Hydroxy-20(29)-lupaene-28-oic acid
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS#	EC #	% Composition
Betulinic Acid	472-15-1	-	≥95

Section 3: Hazards Identification

Symbols	N/A
HMIS Classification	<p style="text-align: center;">FLAMMABILITY</p>  <p style="text-align: center;">HEALTH REACTIVITY</p> <p style="text-align: center;">OTHER</p>

NFPA Classification	
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Section 4: First Aid Measures

General Overview:	No significant hazard.
Inhalation:	Harmful by inhalation. Inhalation may cause nausea and vomiting. May cause dizziness and headache. Move the exposed person to fresh air. Seek medical attention.
Skin:	May cause irritation to skin. May cause dermatitis. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
Eyes:	May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
Ingestion:	Harmful if swallowed. Ingestion may cause nausea and vomiting. Ingestion is irritating to the respiratory tract and may cause damage to the central nervous system. DO NOT INDUCE VOMITING. If swallowed, seek medical advice immediately and show this container or label.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	No data available
Extinguishing Media:	Use as appropriate: Carbon dioxide (CO ₂), Dry chemical, Foam.
Hazardous thermal (de)composition products:	Burning produces irritating, toxic and obnoxious fumes.
Special Fire Fighting Procedures:	Self-contained breathing apparatus. Wear protective clothing.
Flash Point:	No data available





Section 6: Accidental Release Measures

Personal Precautions:	Ensure adequate ventilation of the working area. Wear suitable protective equipment.
Environmental Precautions:	Do not allow product to enter drains. Prevent further spillage if safe.
Methods for Clean-up:	Avoid raising dust. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

SECTION 7: Handling & Storage

Storage:	Keep in a cool, dry, well-ventilated area. Keep containers tightly closed. Recommended to store at room temperature.
Handling:	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying, and dispensing.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>Self-contained breathing apparatus. Wear protective clothing.</p>	
Skin and Body:		 <p>Wear chemical protective clothing. Chemical resistant gloves (PVC).</p>
Eyes:		

	Approved safety goggles.
Ventilation/Engineering Measures:	Ensure adequate ventilation of the working area.
Hygiene:	Handle in accordance with good industrial hygiene and safety practice.
Other:	N/A

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	White to off-white solid, odorless
Formula	C ₃₀ H ₄₈ O ₃
Molecular Wt.	456.7
Melting Pt.	No data available
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	DMSO
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions
Hazardous decomposition products:	Carbon oxides
Materials to Avoid:	No data available
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	N/A
ACUTE Toxicity:	Harmful by inhalation, in contact with skin and if swallowed. Caution - substance not yet fully tested.
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

	<p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by AGGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>
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SECTION 12: Ecological Information

Ecotoxicity:	No data available
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Dispose of in compliance with all local and national regulations.
Contaminated Packaging:	Dispose of in compliance with all local and national regulations.

SECTION 14: Transportation Information

UN ID#:	N/A
ADR / RID (LAND):	Not regulated
DOT regulations:	Not regulated
IMDG/IMO (SEA):	Not regulated
IATA/DGR (AIR):	Not regulated
Special Provisions:	N/A

SECTION 15: Regulatory Information

Health Phrases:	Not hazardous
Risk Phrases:	N/A

Safety Phrases:	N/A
EU Regulations:	N/A
US Regulations:	TSCA: Not listed California Proposition 65: No products were found
U.S. Federal Regulations:	SARA 302/304 emergency planning and notification: No products were found. SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found. SARA 313 toxic chemicals notification and release reporting: 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 (CAA) 112 regulated toxic substances: No products were found. OSHA: No products were found.
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*