

SAFETY DATA SHEET



1. Identification

Product identifier	CAYUSE PLUS
Other means of identification	None.
Recommended use	Ag Product - Adjuvant
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	Wilbur-Ellis Company LLC
Address	Wilbur-Ellis Company LLC 8131 W. Grandbridge Blvd, Suite 200 Kennewick, WA 99336 United States
Telephone	Branded Products Information (800) 500-1698
E-mail	SDS@WilburEllis.com
Emergency phone number	Chemtrec - Domestic (800) 424-9300 Chemtrec - International +1 703-741-5970

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ammonium Sulfate		7783-20-2	20 - < 30
Ethylene Glycol		107-21-1	3 - < 5
1-Butanol		71-36-3	1 - < 3
Other components below reportable levels			60 - < 70

Percentage ranges of composition to protect confidentiality or due to batch variation.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.

Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with inert absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
1-Butanol (CAS 71-36-3)	PEL	300 mg/m ³ 100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
1-Butanol (CAS 71-36-3)	TWA	20 ppm	
Ethylene Glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1-Butanol (CAS 71-36-3)	Ceiling	150 mg/m ³ 50 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

1-Butanol (CAS 71-36-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

1-Butanol (CAS 71-36-3) Skin designation applies.

US - Tennessee OELs: Skin designation

1-Butanol (CAS 71-36-3) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

1-Butanol (CAS 71-36-3) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Amber liquid

Physical state Liquid.

Form Liquid.

Color Amber

Odor Mild.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) Soluble

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	10.26 lb/gal
Specific gravity	1.23

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
1-Butanol (CAS 71-36-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	3430 mg/kg, 24 Hours 4.24 ml/kg, 24 Hours
<i>Oral</i>		
LD50	Rat	4360 mg/kg 2.83 ml/kg
Ammonium Sulfate (CAS 7783-20-2)		
Acute		
<i>Dermal</i>		
LD50	Mouse	> 2000 mg/kg
	Rat	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	4250 mg/kg
Ethylene Glycol (CAS 107-21-1)		
Acute		
<i>Dermal</i>		
LD50	Mouse	> 3500 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2.5 mg/l, 6 Hours

Components	Species	Test Results
Oral LD50	Rat	7712 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Erythema value	1.1100	
Oedema value	0.5555	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Corneal opacity value	0.0000	
Iris lesion value	0.3333	
Conjunctival reddening value	1.6667	
Conjunctival oedema value	0.3333	
Recover days	4	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Sensitization CAYUSE PLUS	Result: Non-Sensitizing Species: Rabbit	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available.	
Partition coefficient n-octanol / water (log Kow)		
1-Butanol	0.88	
Ethylene Glycol	-1.36	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information**DOT**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information**US federal regulations**

All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1-Butanol (CAS 71-36-3) Listed.

Ethylene Glycol (CAS 107-21-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
AMMONIA (INCLUDES ANHYDROUS AMMONIA AND AQUEOUS AMMONIA FROM WATER DISSOCIABLE AMMONIUM SALTS AND OTHER SOURCES; 10% OF TOTAL AQUEOUS AMMONIA IS REPORTABLE UNDER THIS LISTING)	7783-20-2	20 - < 30
ETHYLENE GLYCOL	107-21-1	3 - < 5
N-BUTYL ALCOHOL	71-36-3	1 - < 3

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Ethylene Glycol (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

US. Massachusetts RTK - Substance List

1-Butanol (CAS 71-36-3)
 Ammonium Sulfate (CAS 7783-20-2)
 Ethylene Glycol (CAS 107-21-1)

US. New Jersey Worker and Community Right-to-Know Act

1-Butanol (CAS 71-36-3)
 Ethylene Glycol (CAS 107-21-1)

US. Pennsylvania Worker and Community Right-to-Know Law

1-Butanol (CAS 71-36-3)
 Ammonium Sulfate (CAS 7783-20-2)
 Ethylene Glycol (CAS 107-21-1)

US. Rhode Island RTK

1-Butanol (CAS 71-36-3)
 Ethylene Glycol (CAS 107-21-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

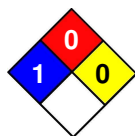
International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-23-2016
Version # 01
NFPA ratings Health: 1
 Flammability: 0
 Instability: 0

NFPA ratings**Disclaimer**

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