

BRANDT®

Adjuvant Product Guide





HELPING CUSTOMERS ACHIEVE BETTER RESULTS

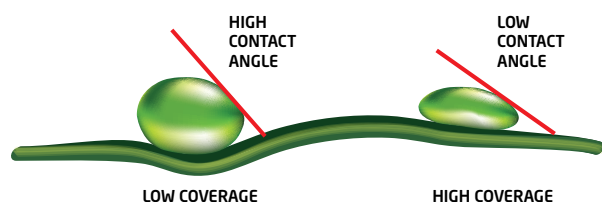
**With our growing line of
adjuvant products**

BRANDT is a leading manufacturer and supplier of specialty inputs for the agriculture, turf and ornamental, and lawn and garden markets. The company is at the forefront of adjuvant technologies and offers over 40 adjuvant solutions - 7 of which are OMRI Listed and approved for use in organic production.

What is an Adjuvant?

Agricultural adjuvants are used to enhance the effectiveness of fertilizer and pesticide applications. They are added to the tank mix to modify the action or characteristics of the spray solution. Many adjuvants improve application deposition, spreading, wetting and penetration. Others reduce spray drift, buffer pH and manage foam.

Non-ionic surfactants are the most commonly used type of adjuvant. They act as surface active agents to break the hydrogen bond between water molecules and reduce surface tension of the spray solution. This flattens the spray droplets and allows better application coverage. Surfactants can reduce spray application surface tension by over 50% - to 20-30 dynes/cm compared to water at 72 dynes/cm.



CPDA Certified Products

BRANDT is a proud participant in the Council of Producers & Distributors of Agrotechnology Adjuvant Certification Program, which ensures that BRANDT adjuvants meet the quality and standards set by the CPDA. Products certified under this program must meet 17 separate benchmarks that are based on technologically and scientifically derived definitions and standards.



CPDA logo is a registered trademark of Council of Producers & Distributors of Agrotechnology.



Surfactants

Non-Ionic Surfactants

BRANDT Magnify *CPDA Certified*

Non-ionic surfactant and water conditioner. Contains ammonium ions to improve activity, wetting, spreading and penetration. Designed for use with herbicides, defoliants and desiccants that require ammonium sulfate/nitrate and a surfactant. Recommended for use with glyphosate, paraquat and sulfonyl urea herbicides.

BRANDT Organics Ag Aide *OMRI Listed*

Non-ionic surfactant that contains 100% *Yucca schidigera* extract. Enhances the activity of pesticides and foliar nutrients. Foliar applications provide rapid wetting and improve absorption. Soil applications increase water penetration and wetting of hydrophobic soils.

BRANDT Ultra 90

General purpose, low foam non-ionic surfactant and activator. Improves foliar wetting and enhances spray application efficacy. Humectant properties slow the dry down of the spray application.

BRANDT No Foam A

General purpose, low foam non-ionic surfactant and activator. Improves foliar wetting and enhances spray application efficacy. Humectant properties slow the dry down of the spray application.

BRANDT InSpray 90

General purpose, low foam non-ionic surfactant and activator. Improves foliar wetting and spray application efficacy.

Silicone Based Surfactants

BRANDT 719 Spreader *OMRI Listed*

Proprietary non-ionic surfactant/wetting agent that contains trisiloxane alkoxylate. Improves pesticide spray coverage and uptake. Prevents evaporation and runoff that can occur with traditional organosilicone agents. May be used at a lower rate than conventional non-ionic surfactants.

BRANDT Super Wetter *OMRI Listed*

Highly effective non-ionic surfactant/penetrant. Contains 100% organo-modified siloxane, which may be used with spray oils and EC formulations. Reduces spray application surface tension to allow better coverage, wetting and faster absorption.





Stickers

BRANDT Organics S-K-H Sticker *OMRI Listed*

Premium dry sticker. Enhances pesticide and fertilizer efficacy. Helps the spray application adhere to the target and resist rain/irrigation wash-off.

BRANDT Umbrella

Spreader/sticker enhances the efficacy of foliar applied pesticides and pre-emergent herbicides. Improves spreading and forms a rain fast film that keeps the spray application on the plant. Adheres pre-emergent herbicides to the soil, which may reduce leaching.

Vegetable Oil Concentrates

BRANDT M.S.O. *CPDA Certified*

High quality activator/penetrant that contains 15% surfactant versus the 10% typically found in competitive products. It provides superior wetting and spreading to maximize pesticide application efficacy. Recommended as an alternative to non-ionic surfactants and petroleum crop oils.

BRANDT Sidekick™

Non-ionic surfactant and sticker that contains 93% cottonseed oil emulsion. Improves pesticide application coverage, deposition and canopy penetration. Helps reduce application evaporation. Ideal for aerial and ground applications with low water volume.

Crop Oil Concentrates

BRANDT Crop Oil *CPDA Certified*

Non-ionic surfactant that contains 83% petroleum oil. Improves foliar absorption and efficacy of herbicides and systemic fungicides.

Multi-Functional Adjuvants

BRANDT AdjuLock®

Multi-function drift reduction agent, water conditioner and surfactant. Contains a non-AMS water conditioner to minimize herbicide antagonism with nutrients present in hard water (Ca, Mg, Fe). Improves herbicide efficacy, wetting and spreading. Reduces driftable fines.

BRANDT Insure®

Multi-function water conditioner, acidifier and non-ionic surfactant. Contains ammonium ions to improve application activity, wetting, spreading and penetration. Conditions and acidifies alkaline water. Recommended for use with post-emergent herbicides such as glyphosate to minimize antagonism with nutrients present in hard water (Ca, Mg, Fe).

BRANDT Super 7 *CPDA Certified*

Multi-function surfactant, penetrant, deposition aid and acidifier. Decreases application surface tension to improve deposition, coverage, penetration and efficacy. Reduces spray drift and lowers pH of the spray solution to prevent alkaline hydrolysis of pesticides sensitive to high pH.

BRANDT Torpedo® *CPDA Certified*

Multi-function non-ionic surfactant, penetrant and deposition aid. Designed for use with pesticides when a non-ionic surfactant, crop oil concentrate, or methylated seed oil is required. The formulation is pH neutral and works well with systemic chemistries. It decreases surface tension of the spray application to improve deposition, coverage and penetration. Helps reduce drift.

BRANDT No Foam B

Non-ionic surfactant and activator. Provides quick wetting and uniform spreading of pesticides, including organophosphate formulations. May be used to buffer highly alkaline water. Ideal for use with fungicides/insecticides that are sensitive to high pH.

BRANDT A+™

Proprietary non-ionic surfactant that contains novel drift reduction technology. Humectant properties improve deposition and slow application dry down. Improves application activity and efficacy. An excellent option for sensitive crops.



Acidifier & Buffering Agents

BRANDT Indicate 5®

Multi-function non-ionic surfactant, pH indicator and acidifier. Improves spray application coverage and performance. Built-in pH indicator turns spray water pink when the optimum pH level of 4.5-5.5 is reached.

BRANDT pH Adjust

Citric acid acidifier and buffering agent. Lowers pH of spray solutions where phosphoric acid or other strong acids are undesirable.

Constant BU^{pH}-er *OMRI Listed*

Sustainable pH buffer that contains citric acid and vinegar. Lowers water pH while minimizing the potential for damage to equipment. May be used with foliar nutrients and crop protection products.

Drift Reduction Agents

38-F

32% polyacrylamide polymer used as drift retardant additive. May be used in aerial and ground pesticide applications.

41-A

30% dry-flowable polyacrylamide, polysaccharide polymer used as drift retardant additive. May be used in aerial and ground pesticide applications.

BRANDT OnSite

1% polyvinyl polymer deposition aid and drift control agent. Improves spray deposition, crop canopy penetration and reduces drift. Compatible with all glyphosate formulations and most water soluble, emulsified and wettable powder pesticides.

Water Conditioner

BRANDT Inhance

Liquid ammonium sulfate water conditioner. Designed for use with herbicides that recommend or require the addition of ammonium sulfate. Increases herbicide uptake and reduces antagonism.

Irrigation Aids & Soil Penetrants

AquiMax®

Soil water management aid and polymer. Evenly distributes moisture to the root zone with irrigation injection. Improves water infiltration and movement in the soil profile. Improves soil wetting and application penetration on dry, hardened soils.

BRANDT SoilStay™

Powder grade polyacrylamide soil stabilizer. Used to manage erosion caused by irrigation run off and improve water infiltration.

Colorants

BRANDT Big Foot® Blue

Blue colorant and temporary spray pattern indicator. Used on turf, landscape and non-crop use sites. *Also available in a super strength concentrate (BRANDT Big Foot SS) and water soluble bags (BRANDT Big Foot WSB).*

BRANDT Mark-It Red

Concentrated red colorant and temporary spray pattern indicator. Used with herbicides and fertilizers. Designed to replace rhodamine red dyes.



Hydrology Drip Line Maintenance Aids

BioSide HS™ 15%

15% is a peroxyacetic acid-based microbiocide. Disinfects and sanitizes irrigation water. Controls bacteria, slime, odor and algae.

BRANDT Drip-Rite® 1000

One time system flush for irrigation systems to treat mineral deposits caused by hard water.

BRANDT Drip-Rite 2500

Preventative treatment for mineral deposits in drip irrigation systems.

BRANDT Drip-Rite 3000

Preventative treatment for mineral scale and calcium deposits in drip irrigation systems.

BRANDT Drip-Rite 6000

Eliminates and prevents rust in drip irrigation systems.

Drip-Rite 4000

Algaecide and bactericide. Suppresses odors and toxic gas in ponds. Controls algae and bacteria in ponds, reservoirs, and other irrigation water systems.

Utility Adjuvants & Application Aids

BRANDT Insect Bait

Liquid insect bait containing corn-based protein and sugar. Attracts insect to the target application site. Enhances the effectiveness of certain agricultural insecticide applications. Listed on the UC Integrated Pest Management website for walnuts.

BRANDT Odor-Mask

Contains methyl salicylate (oil of wintergreen) to mask undesirable pesticide odors.

BRANDT Organics Defoamer *OMRI Listed*

Premium silicone based anti-foaming agent. Prevents and treats foam in the tank mix.

BRANDT Pesticide Equipment Cleaner

Effective, all-purpose tank and equipment cleaner. Decontaminates spray rigs and storage tanks. Removes residual pesticides.

BRANDT Tripleline Defoamer

High quality silicone based anti-foaming agent. Prevents and treats foam in the tank mix.

Tank Mixing Sequence

Add different formulation types in the sequence indicated below.* Allow time for complete mixing and dispersion after addition of each product.

- Water soluble bags
- Water dispersible granules
- Wettable powders
- Water based suspension concentrates
- Water-soluble concentrates
- Oil based suspension concentrates
- Emulsifiable concentrates
- Adjuvants, surfactants and oils
- Soluble fertilizers
- Drift retardants

*Unless otherwise specified by manufacturer directions for use or by local experience.

Spray Tank Cleaning Tips

Prior to application, always start with clean, well maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove or effect sprayer efficiency.



BRANDT Adjuvants Quick Reference Guide

Product	Use Rate	Description	Acidifier Buffer	Deposition Aid	Drift Control	Penetrant	Spreader	Sticker	Water Conditioner	Utility	OMRI Listed
38-F	3-5 oz/ 100 gal	32% polyacrylamide polymer		●	●					●	
41-A	2-5 oz/ 100 gal	30% flowable dry polyacrylamide /polysaccharide polymer		●	●					●	
BRANDT 719 Spreader	6-12 oz/ 100 gal	Non-ionic wetting agent, spreader, and penetrant				●	●				●
BRANDT A+	1/2-3 pts/ 100 gal	Non-ionic spreader, activator, and drift reduction agent		●	●	●	●				●
BRANDT AdjuLock	5 pts/ 100 gal	Non-AMS water conditioner, drift reduction agent and surfactant		●	●		●		●		
BRANDT Crop Oil	1-4 pts/ 100 gal	83%/17% crop oil concentrate				●	●				
BRANDT Indicate 5	5-32 oz/ 100 gal	Non-ionic surfactant pH indicator and acidifier	●				●		●		
BRANDT Inhance	3-5 qts/ 100 gal	Liquid AMS water conditioner							●		
BRANDT Insect Bait	2-8 pts/ acre	Enhances effectiveness of certain ag insecticides								●	
BRANDT InSpray 90	1/2-4 pts/ 100 gal	90% active non-ionic surfactant and activator					●				
BRANDT Insure	1-4 pts/ 100 gal	Water conditioner, acidifier, non-ionic surfactant	●				●		●	●	
BRANDT Magnify	1-4 qts/ 100 gal	Non-ionic surfactant and water conditioner					●		●	●	
BRANDT M.S.O.	1/2-2 pts/ 100 gal	100% active modified vegetable oil concentrate		●		●	●				
BRANDT No Foam A	1/2-2 pts/ 100 gal	Non-ionic surfactant/activator					●				
BRANDT OnSite	1-5 qts/ 100 gal	1% polyvinyl polymer, deposition aid and drift retardant		●	●					●	
BRANDT Organics Ag Aide	4-16 oz/ 100 gal	Non-ionic, 100% <i>Yucca schidigera</i> extract surfactant				●	●				●
BRANDT Organics Defoamer	1/2-2 oz/ 100 gal	Antifoaming agent								●	●
BRANDT Organics S-K-H Sticker	3/4-2 lbs/ 100 gal	Premium dry sticker						●			●
BRANDT pH Adjust	1/2-1 pt/ 100 gal	Citric acid based acidifier/ buffering agent	●							●	
BRANDT Sidekick	1-2 qts/ 5-20 gal	Non-ionic surfactant, sticker with cotton seed oil emulsion		●		●	●	●			
BRANDT Super Wetter	3-6 oz/ 100 gal	Premium 100% organo-modified siloxane spreader				●	●				●
BRANDT Super 7	1/2-2 pts/ 100 gal	Surfactant, penetrant, deposition aid and acidifier	●	●	●	●	●				
BRANDT Torpedo	1/2-2 pts/ 100 gal	pH neutral deposition aid, non-ionic surfactant and penetrant		●	●	●	●				
BRANDT Tripleline Defoamer	1/2-2 oz/ 100 gal	Antifoam/defoaming agent								●	
BRANDT Ultra 90	1/2-4 pts/ 100 gal	Non-ionic surfactant and activator					●				
BRANDT Umbrella	4-16 oz/ acre	Non-ionic surfactant/terpene resin sticker					●	●		●	
Constant BUph-er	1/2-2 qts/ 100 gal	Citric acid based acidifier/ buffering agent	●							●	●
BRANDT No Foam B	1/2-3 pts/ 100 gal	Non-ionic surfactant, activator and buffer blend	●				●				

*Always read and follow label instructions



BRANDT Adjuvants Approved for Use with New Cropping Systems

As seed traits and cropping systems change, so do tank mix partners. BRANDT is at the forefront of adjuvant technologies that are approved for use with the herbicides listed below.

Formulation	Product Description	XtendiMax®	Engenia®	FeXapan®	Enlist Duo®	Enlist One®	Tavium®
BRANDT Onsite	Drift Reduction Agent/Deposition Aid	●	●	●	●	●	●*
BRANDT Inspray 90	Surfactant/Activator	●*	●	●*	●	●	
BRANDT Torpedo	Surfactant/Penetrant/Deposition Aid	●*		●*		●	
BRANDT AdjuLock	Drift Reduction Agent/Non-AMS Water Conditioner/ Surfactant	●	●	●			●*
BRANDT Inhance	Ammonium Sulfate Water Conditioner				●		
BRANDT Umbrella	Spreader/Sticker				●		
BRANDT M.S.O.	Activator/Penetrant	●	●*				
BRANDT A+	Surfactant/Activator/Drift Reduction Agent	●*		●*			

*with approved DRA

The list of approved BRANDT products is growing! To see the most current list of approved products visit www.brandt.co/tankmixapprovals

Not all products listed in this catalog are available for sale in all U.S. states. For information regarding product availability in your area, please contact Brandt Consolidated, Inc.

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Common Adjuvant Terms and Definitions

- **Acidifier:** a material that can be added to spray mixtures to lower the pH.
- **Activator:** a material that increases the biological efficacy of agrichemicals.
- **Buffer or buffering agent:** a compound or mixture that, when contained in solution, causes the solution to resist change in pH. Each buffer has a characteristic limited range of pH over which it is effective.
- **Crop oil concentrate:** an emulsifiable petroleum oil-based product containing 15 to 20% w/w surfactant and a minimum of 80% w/w phyto bland oil.
- **Deposition aid:** a material that improves the ability of agrochemical sprays to deposit on targeted surfaces.
- **Drift reduction agent:** a material used in liquid spray mixtures to reduce driftable fines.
- **Humectant:** a material which increases the equilibrium water content and increases the drying time of an aqueous spray deposit.
- **Modified vegetable oil concentrate:** an emulsifiable, chemically modified vegetable oil product containing 5 to 20% w/w surfactant and the remainder chemically modified vegetable oil.
- **Non-ionic surfactant:** a surface-active agent having no ionizable polar end groups but comprised of hydrophilic and lipophilic segments.
- **Penetrant:** a material that enhances the ability of an agrichemical to enter a substrate or penetrate a surface.
- **Silicone surfactant:** a surface active agent in which at least 75% (by weight) is derived from organically modified silicone.
- **Spreader:** a material which increases the area that a droplet of a given volume of spray mixture will cover on a target.
- **Sticker:** a material that assists the spray deposit to adhere to the target in terms of resistance to wind, water and mechanical action.
- **Surface-active agent:** a material comprised of lipophilic and hydrophilic parts that when added to a liquid medium modifies the properties of the surface or interface by concentrating at the surface or interface.
- **Vegetable oil concentrate:** an emulsified vegetable oil product containing 5 to 20% w/w surfactant and a minimum of 80% w/w vegetable oil.
- **Water conditioning agent:** a material that reduces or eliminates the antagonism between a pesticide and ions present in the application water and results in improved bioefficacy.

Brandt Consolidated, Inc.

2935 South Koke Mill Road
Springfield, Illinois 62711 USA
800 300 6559
217 547 5840

3654 South Willow Avenue
Fresno, California 93725 USA
559 499 2100

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www.BRANDT.co

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