Adjuvant Products Guide
What is an Adjuvant?

Adjuvants are materials added to a tank mix to aid or modify the action of an agrichemical or the physical characteristics of the mixture. Depending upon the treatment goals, adjuvants can advance the performance of the spray mixture by improving spreading, penetration, deposition, wetting, sticking, and moisture retention properties. Others can reduce drift, acidify or buffer the spray tank pH, condition spray water, and suppress or prevent spray tank foam.

The most common types of tank mix adjuvants are non-ionic surfactants (surface active agents). A surfactant will reduce the internal energy of a spray droplet that holds the droplet into a sphere and causes it to “bead up” on leaf surfaces. Surfactant molecules are water and oil soluble, which allows them to migrate to the surface of the liquid and break the hydrogen bond between water molecules. This flattens the droplet, allowing it to cover more of the leaf surface. This energy is referred to as surface tension and is measured in dynes/cm. The surface tension of water is generally recognized to be 72 dynes/cm. Most quality surfactants will reduce the surface tension of the spray solution to 20-30 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.

For over 60 years, BRANDT® has had an underlying common theme: focus on its customer’s success.

Since 1953, BRANDT has manufactured nutritional, adjuvant, and plant protection solutions for agricultural and non-crop markets. Today, BRANDT brings these new technologies and innovative processes to consumers around the world, helping to make our customers more profitable and the world’s food supply more secure.
Surfactants

NON-IONIC SURFACTANTS (NIS)

BRANDT Magnify - CPDA Certified
Designed for all glyphosate, paraquat, and sulfonyl urea herbicide formulations, unique BRANDT MAGNIFY is a powerful combination of non-ionic surfactant and liquid fertilizer products that increases effectiveness of all formulations of these materials when used either alone or in herbicide tank mixes. APE free BRANDT MAGNIFY may be used on agricultural, aquatic, forestry, vegetation management, and other non-crop sites.

BRANDT Organics Ag Aide - OMRI Listed
Non-ionic surfactant that enhances the activity and performance of pesticides. Provides rapid wetting and improves absorption of the spray solution. 100% Yucca schidigera extract. Previously sold under the brand name Green Cypress® Ag Aide.

BRANDT Ultra 90
A 90% active, non-ionic surfactant that improves the wetting of foliage and enhances the efficacy of spray solutions. Contains a humectant to increase the drying time of the aqueous spray deposit by increasing its equilibrium water content.

BRANDT No Foam A
Premium 90% non-ionic spreader and activator. Low foaming formulation allows for increase performance of a wide range of pesticides applied to agricultural, aquatic, forestry, vegetation management, turf, horticultural, and other non-crop sites.

BRANDT InSpray 90
BRANDT INSPIRAY 90 is a general purpose, low foam non-ionic spreader/activator that helps maximize the effectiveness of insecticide, herbicide (aquatic and terrestrial), fungicide, defoliant and desiccant applications. It is designed for quick wetting, uniform droplet distribution and increased spray retention on leaf and stem surfaces.

SILICONE BASED SURFACTANTS

BRANDT 719 Spreader - OMRI Listed
Proprietary non-ionic trisiloxane alkoxylate based wetting agent. It’s unique trisiloxane surfactant and co-polymer formulation is designed to prevent quick evaporation and run-off problems associated with some organosilicone based wetting agents. BRANDT 719 SPREADER can be used at much lower rates than conventional non-ionic surfactants.

BRANDT Super Wetter - OMRI Listed
A 100% premium non-ionic organosilicone surfactant engineered to efficiently wet the target and improve coverage by imparting phenomenal spreading characteristics at only 0.02 to 0.15 wt%. Beneficial in low volume spray applications and hard to penetrate dense and hydrophobic surfaces.
Surfactants

**STICKERS**

**BRANDT® Organics S-K-H Sticker - OMRI Listed**
A premium dry sticker that is recommended for use with insecticides, fungicides, and nutritional sprays. Resists rain and irrigation wash-off by adhering the spray deposit to the target.

**BRANDT® Umbrella**
Premium non-ionic polymeric terpene resin spreader/sticker containing retention agents that form a weatherable film upon drying. May be used by air, ground, or chemigation to improve foliar spray deposit adhesion. Use with soil applied herbicides to stabilize and improve performance of certain pre-emergent herbicides.

**VEGETABLE OIL CONCENTRATES (VOC)**

**BRANDT M.S.O. – CPDA Certified**
A superior multi component modified vegetable oil concentrate developed as replacement for pesticide labels recommending either a NIS or COC. Designed to maximize the performance of crop protection chemicals by assisting penetration of the spray mix through the plant cuticle.

**BRANDT Sidekick™**
Designed to improve deposition and crop canopy penetration of the spray mix. BRANDT SIDEKICK is formulated to increase the coverage of pesticide sprays and to reduce evaporation of the spray mixture on plant surfaces after application. Well suited for aerial application and ground application using low volumes of water or where the vegetable oil concentrate acts as the carrier in the pesticide spray mixture.

**CROP OIL CONCENTRATES**

**BRANDT Crop Oil – CPDA Certified**
A 100% active crop oil concentrate used as a spreader/activator/penetrant to increase the foliar absorption of various herbicides and systemic fungicides. It is a blend of 83% petroleum oil and 17% non-ionic surfactant.

**MULTI-FUNCTIONAL ADJUVANTS**

**BRANDT AdjuLock™**
BRANDT ADJULOCK is a multi-purpose adjuvant that reduces driftable fines, and improves the wetting and spreading properties of the tank mix. It is formulated with a non-AMS water conditioner to enhance the performance and consistency of post-emergent herbicides by reducing or eliminating the tie-up of anionic herbicides with metal cations present in hard water such as calcium (Ca), magnesium (Mg) and iron (Fe). It may be used on agricultural, forestry, turf and ornamental, industrial and non-cropland sites.

**BRANDT Insure®**
Superior multi-purpose adjuvant that improves spray tank performance by conditioning hard water and acidifying alkaline water. BRANDT INSURE contains ammonium ions for improved translocation and improves compatibility of micronutrient tank mixes such as manganese (Mn) with glyphosate and other anionic herbicides that are deactivated by metal cations contained in hard water such as calcium, magnesium, and iron.

**BRANDT Super 7 – CPDA Certified**
Multi-function properties help control droplet uniformity, reduce amount of driftable fines, and reduce spray tank pH levels for improved pesticide uptake and efficacy. BRANDT SUPER 7 works as a surfactant, is an excellent penetrant, and is APE free.

**BRANDT Torpedo® – CPDA Certified**
A unique 100% active methylated vegetable oil, lecithin, and surfactant blend that can be used with pesticides that recommend a NIS, COC, or MSO. pH neutral BRANDT TORPEDO is suited well for systemic chemistries, while its multi-component design enhances penetration properties, offers superior spreading, improves deposition of spray droplets, and reduces the production of fine droplets which are susceptible to off target movement.

**No Foam B**
A specialized non-ionic surfactant blend designed as a spreader/activator/buffer for use on sensitive crops. Ideal for use with insecticides and fungicides when spray tank pH is a factor.

**BRANDT A+™**
BRANDT A+ is a proprietary non-ionic surfactant that has unique properties that reduce physical drift, and enhance spray application deposition and surface activity. It also promotes superior wetting, uptake and retention of many agrochemical sprays. BRANDT A+ may be used on agricultural, aquatic, forestry, turf and ornamental, and non-cropland sites.
Acidifier & Buffering Agents

**BRANDT Indicate 5®**
Unique adjuvant that contains a built-in pH indicator, turning the spray tank water pink as soon as the optimum level of 4.5-5.5 is reached. It eliminates the need to test the water pH with any additional equipment. Multi-purpose BRANDT INDICATE 5 aids in wetting, spreading, and acidifying spray applications.

**BRANDT pH Adjust**
An extremely effective citric acid based acidifier and buffering agent specifically formulated for lowering the pH of spray solutions where phosphoric acid or other strong acids are undesirable.

**Constant BUph-er® – OMRI Listed**
A true organic citric acid and organic vinegar buffer that will lower water pH while minimizing the potential for damage to equipment.

Drift Reduction Agents

**38-F®**
A liquid 32% active polyacrylamide polymer. Used as a drift retardant additive. It is designed for use with both ground and aerial equipment.

**41-A®**
A dry 30% active polyacrylamide, polysaccharide polymer. Used as a drift retardant additive. It is designed for use with both ground and aerial equipment.

**BRANDT OnSite**
A 1% polyvinyl polymer designed as a deposition aid and drift retardant. BRANDT ONSITE is compatible with all glyphosate formulations and most water soluble and wettable powder pesticides, desiccants, and defoliants when applied by aerial application or standard ground equipment.

Water Conditioner

**BRANDT Inhance**
BRANDT INHANCE is a water conditioning agent designed for use with herbicides that recommend or require the addition of ammonium sulfate. It enhances herbicide performance by increasing uptake and reducing herbicide antagonism.

Irrigation Aids & Soil Penetrants

**Aquimax®**
AQUIMAX is a soil water management aid and polymer system that improves water infiltration, and the lateral movement of water through the soil profile. It helps faciltate soil wetting and quick penetration of irrigation/precipitation into weather hardened, arid soils. It is the first product to evenly distribute moisture retaining polymer to the root zone with standard irrigation.

**Aqua-Pam™ PR 3005**
A liquid concentrate retention aid that increases the available water content of soils, improving plant growth and reducing irrigation requirements. Reduces erosion, prevents crust formation, and improves general stabilization.

**BRANDT SoilStay™**
Effective irrigation aid used to manage irrigation-induced erosion and improve soil profile water infiltration.

**Safe Zone 0-0-13**
A liquid soil treatment used to disperse accumulated salts through the soil profile, reducing soluble salts in the root zone. Can be used through all types of irrigation systems.

Colorants

**BRANDT Big Foot®**
A tank-mix blue colorant designed as a temporary spray pattern indicator for use on golf courses, landscape turf, and other non-crop use sites.

**BRANDT Big Foot SS**
A concentrated tank-mix blue colorant designed as a temporary spray pattern indicator for use on golf courses, landscape turf, and other non-crop use sites.

**BRANDT Mark-It-Red**
A concentrated red colorant designed as a temporary spray indicator primarily for use with herbicides. Replaces rhodamine red dyes. Also used to dye fertilizer solutions.
Utility Adjuvants & Application Aids

**BRANDT Insect Bait**
Corn derived, proteinaceous liquid that enhances the effectiveness of certain agricultural insecticide applications.

**BRANDT Odor-Mask**
A concentrated odor masking agent containing methyl salicylate (oil of wintergreen).

**BRANDT Organics Defoamer – OMRI Listed**
Premium silicone based anti-foaming agent designed to prevent foam formation or defeat existing foams in pesticide spray solutions.

**BRANDT Pesticide Equipment Cleaner**
A highly effective all-purpose liquid tank and equipment cleaner used to decontaminate spray rigs, storage tanks, etc. Use before changing from one agricultural chemical to another and before storing equipment.

**BRANDT Tripleline Defoamer**
A multi-component defoamer that effectively eliminates or suppresses foam in the spray tank.

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 Cleanout
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.
<table>
<thead>
<tr>
<th>Product</th>
<th>Use Rate</th>
<th>Description</th>
<th>Acidifier Buffer</th>
<th>Deposition Aid</th>
<th>Drift Control</th>
<th>Penetrant</th>
<th>Spreader</th>
<th>Sticker</th>
<th>Water Conditioner</th>
<th>Utility</th>
<th>OMRI Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>38-F</td>
<td>3-5 oz/100 gal</td>
<td>32% active liquid polyacrylamide polymer</td>
<td>●</td>
<td>●</td>
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<tr>
<td>41-A</td>
<td>2-5 oz/100 gal</td>
<td>30% active dry polyacrylamide/poly saccharide polymer</td>
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<tr>
<td>BRANDT 719</td>
<td>6-12 oz/100 gal</td>
<td>OMRI Listed non-ionic wetting agent, spreader, and penetrant</td>
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<tr>
<td>BRANDT A+</td>
<td>1/2-3 pt/100 gal</td>
<td>90% active non-ionic spreader, activator, and drift reduction agent</td>
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<tr>
<td>BRANDT AdjuLock</td>
<td>5 pts/100 gal</td>
<td>Non-AMS water conditioner, drift reduction agent &amp; surfactant</td>
<td>●</td>
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<tr>
<td>BRANDT Crop Oil</td>
<td>1-4 pts/100 gal</td>
<td>83%/17% crop oil concentrate</td>
<td>●</td>
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<tr>
<td>BRANDT Indicate</td>
<td>5-32 oz/100 gal</td>
<td>83% non-ionic surfactant containing a pH indicator</td>
<td>●</td>
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<tr>
<td>BRANDT Inhance</td>
<td>3-5 qt/100 gal</td>
<td>Liquid AMS water conditioner</td>
<td>●</td>
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<tr>
<td>BRANDT Insect Bait</td>
<td>2-8 pts/acre</td>
<td>Enhances effectiveness of certain ag insecticides</td>
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<tr>
<td>BRANDT InSpray 90</td>
<td>1/2-4 pts/100 gal</td>
<td>90% active non-ionic spreader &amp; activator</td>
<td>●</td>
<td>●</td>
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<tr>
<td>BRANDT Insure</td>
<td>1-4 pts/100 gal</td>
<td>Conditioner, acidifier, compatibility agent</td>
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<tr>
<td>BRANDT Magnify</td>
<td>1-4 pts/100 gal</td>
<td>APE free surfactant and water conditioner</td>
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<tr>
<td>BRANDT M.S.O.</td>
<td>1/2-2 pts/100 gal</td>
<td>100% active modified vegetable oil concentrate</td>
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<tr>
<td>BRANDT No Foam A</td>
<td>1-2 pts/100 gal</td>
<td>90% active non-ionic spreader/activator</td>
<td>●</td>
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<tr>
<td>BRANDT OnSite</td>
<td>1-5 qts/100 gal</td>
<td>1% polyacrylamide, deposition aid and drift retardant</td>
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<tr>
<td>BRANDT Organics Ag Aide</td>
<td>4-16 oz/100 gal</td>
<td>OMRI Listed non-ionic, 100% Yucca schidigera extract surfactant</td>
<td>●</td>
<td>●</td>
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<tr>
<td>BRANDT Organics Defoamer</td>
<td>1/2-2 oz/100 gal</td>
<td>OMRI Listed antifoam/defoaming agent</td>
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<tr>
<td>BRANDT Organics S-K-H Sticker</td>
<td>3/4-2 oz/100 gal</td>
<td>OMRI Listed premium dry formulated sticker</td>
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<tr>
<td>BRANDT pH Adjust</td>
<td>1/2-1 pt/100 gal</td>
<td>Citric acid based acidifier/buffering agent</td>
<td>●</td>
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<tr>
<td>BRANDT Sidekick</td>
<td>1-2 qts/5-20 gal</td>
<td>Emulsified 93% vegetable oil concentrate derived from cottonseed</td>
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<tr>
<td>BRANDT Super Wetter</td>
<td>3-6 oz/100 gal</td>
<td>OMRI Listed premium 100% organosilicone super spreader</td>
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<tr>
<td>BRANDT Super 7</td>
<td>1/2-2 pts/100 gal</td>
<td>Non-ionic, APE free, deposition aid, acidifier, penetrator</td>
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<tr>
<td>BRANDT Torpedo</td>
<td>1/2-2 pts/100 gal</td>
<td>pH neutral deposition aide, surfactant &amp; penetrant</td>
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<tr>
<td>BRANDT Triplinele Defoamer</td>
<td>1/2-2 oz/100 gal</td>
<td>Concentrated antifoam/defoaming agent</td>
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<tr>
<td>BRANDT Ultra 90</td>
<td>1/2-4 pts/100 gal</td>
<td>90% active non-ionic surfactant &amp; humectant</td>
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<tr>
<td>BRANDT Umbrella</td>
<td>4-16 oz/acre</td>
<td>100% active non-ionic spreader/terpene resin sticker</td>
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<tr>
<td>Constant BUph-er</td>
<td>1/2-2 qts/100 gal</td>
<td>OMRI Listed, citric acid based acidifier/buffering agent</td>
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<tr>
<td>No Foam B</td>
<td>1/2-3 pts/100 gal</td>
<td>Non-ionic surfactant and buffer blend</td>
<td>●</td>
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</table>

*Always read and follow label instructions*