

Airout Air Release Agents

Multipurpose Air-release Agents and Surface Tension Depressants

The Airout line of air release agents are additives specially formulated to facilitate the release of entrapped air from epoxy, polyurethane, polyester, and various other polymeric resin systems. They minimize or eliminate the appearance of bubbles, voids in castings and surface defects such as orange peel and cratering in coatings.

These additives are effective in solvent-based, water-based, and 100% solid resin systems. Highly effective, they can be used in very minor concentrations leading to little or no negative impact on the polymeric system and in some cases may actually increase adhesion, wet-out, moisture resistance and gloss.

Applications

- Airout Designed for use in epoxy & polyurethane resins. Rapidly eliminates bubbles in casting, coatings, and impregnation systems. Stable and compatible with most resin systems. Eliminates "sweat out" or oily or greasy surface appearance.
- Airout S Modified version of Airout designed for increased performance in epoxy coatings.
- Super Airout Designed for use in polyester and other resins for rapid reduction of air. In many applications, Super Airout also improves the adhesion, wet-out, and moisture resistance of the system.
- X-Air Excellent for epoxy and polyurethane systems especially for castings or encapsulation systems. Imparts rapid air release with little or no impact on mechanical, chemical, or electrical properties. 100% solids, silicone-free additive.
- Antifoam AF-4 Multipurpose air release agent for epoxy, polyurethane, and polyester systems. Aids air release and surface leveling. Silicone-free.

Benefits

- Improved air release
- Lower surface tension and improved wetting
- Increased surface leveling for glossier finishes

Product description

(average values)

Airout

Viscosity, cP	30
ASTM D-2393 at 25°C	
Specific gravity, g/cm ³	0.86
ASTM D-1963 at 25°C	
Surface tension, dynes/cm	23.1
Tensiometer method	
Percent solids, %	45
ASTM D-2369	
Water solubility	Minimal
Flash point, °C	>40 °C
ASTM D-92	
As supplied form	Water clear liquid
Storage	Airout is combustible. Do not expose to heat, sparks, or open flames. Store at 25°C in its original container.
Shelf-life	12 months

Airout S (Also formerly known as D-Air)

Viscosity, cP	30
ASTM D-2393 at 25°C	
Specific gravity, g/cm ³	0.86
ASTM D-1963 at 25°C	
Surface tension, dynes/cm	22.9
Tensiometer method	
Percent solids, %	44
ASTM D-2369	
Water solubility	Minimal
Flash point, °C	> -5°C
ASTM D-92	
As supplied form	Slightly cloudy liquid
Storage	Airout S is flammable. Do not expose to heat, sparks, or open flames. Store at 25°C in its original container.
Shelf-life	12 months

Super Airout

Viscosity, cP	20
ASTM D-2393 at 25°C	
Specific gravity, g/cm ³	0.96
ASTM D-1963 at 25°C	
Surface tension, dynes/cm	29.6
Tensiometer method	
Percent solids, %	45
ASTM D-2369	
Water solubility	Appreciable
Flash point, °C	> 27 °C
ASTM D-92	
As supplied form	Slightly yellow liquid
Storage	Super Airout is flammable. Do not expose to heat, sparks, or open flames. Store at 25°C in its original container.
Shelf-life	12 months

Product description

(average values)

X-Air

Viscosity, cP ASTM D-2393 at 25°C	40
Specific gravity, g/cm ³ ASTM D-1963 at 25°C	0.97
Surface tension, dynes/cm Tensiometer method	24.1
Percent solids, % ASTM D-2369	100
Water solubility	Minimal
Flash point, °C ASTM D-92	> 115°C
As supplied form Storage	Slightly yellow liquid X-Air is non-flammable, but may foam or spatter above 100°C. Do not store in high temperature areas or near open flames. Store at 25°C in its original container.
Shelf-life	12 months

Antifoam AF-4

Viscosity, cP ASTM D-2393 at 25°C	15
Specific gravity, g/cm ³ ASTM D-1963 at 25°C	0.86
Surface tension, dynes/cm Tensiometer method	28.1
Percent solids, % ASTM D-2369	10
Water solubility	Minimal
Flash point, °C ASTM D-92	>26°C
As supplied form Storage	Clear Liquid X-Air is non-flammable, but may foam or spatter above 100°C. Do not store in high temperature areas or near open flames. Store at 25°C in its original container.
Shelf-life	12 months

Packaging**Unit**

Please call Customer Service (661) 294-1790 for price and availability

Size

Guide to Target Applications

Product	Coatings					Molding / Casting / Encapsulation			
	Epoxy	PUR	Polyester	Water based	Other*	Epoxy	PUR	Polyester	Other*
Airout	X	X		X	X		X		X
Airout S	X					X	X		
Super Airout	X	X	X	X					
X-Air						X	X		
AF-4	X	X	X		X	X	X	X	X

* Includes UV cured acrylates

Suggested Usage Levels

Product	Type	Parts by weight of resin
Airout	Silicone	0.1 – 0.5
Airout S	Silicone	0.1 – 0.5
Super Airout	Silicone	0.25 – 1.00
X-Air	Non-silicone	0.1 – 0.5
Antifoam AF-4	Non-silicone	0.1 – 0.5

These usage levels are only suggested starting levels. The proper amount of an air release agent will vary with resin composition and filler content if any. We suggest starting your evaluation with low levels and increasing the concentration until the optimum effect is achieved. Air release performance should be balanced against the effects of the additives on the other chemical, mechanical, and electrical properties of the system.

In transparent systems, high levels of air release agents can lead to cloudiness. The exact concentration that produces cloudiness will vary with the air release agent selected and the compatibility with the resin system into which it is mixed.

Whichever product is selected should be thoroughly mixed into the resin system. Power mixing is much preferred to hand mixing to achieve thorough dispersion of the air release agent into the system.

Handling precautions

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

Personal hygiene

Airout

WARNING! FLAMMABLE & COMBUSTIBLE Keep away from HEAT, SPARKS & FLAMES. Do not get in eyes, on skin, or on clothing. Wear protective clothing when handling. Wash thoroughly after handling. Avoid breathing vapor. Keep containers closed when not in use. Use only with adequate ventilation. Do NOT take internally.

Airout S

WARNING! FLAMMABLE Keep away from HEAT, SPARKS & FLAMES. Do not get in eyes, on skin, or on clothing. Wear protective clothing when handling. Wash thoroughly after handling. Avoid breathing vapor. Keep containers closed when not in use. Use only with adequate ventilation. Do NOT take internally.

Super Airout

WARNING! FLAMMABLE Do NOT get in eyes, on skin, or clothing. Wear chemical splash goggles and impervious gloves when handling. Wash skin and clothing thoroughly after handling. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep containers closed when not in use. Do NOT take internally.

X-Air

CAUTION! Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

Antifoam AF-4

WARNING! FLAMMABLE Keep away from HEAT, SPARKS & FLAMES. Do not get in eyes, on skin, or on clothing. Wear protective clothing when handling. Wash thoroughly after handling. Avoid breathing vapor. Keep containers closed when not in use. Use only with adequate ventilation. Do NOT take internally

First aid

In case of contact:

- Skin:** Wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Discard contaminated shoes and other articles made of leather.
- Eyes:** Flush eyes with plenty of water for 15 minutes and get prompt medical attention.
- Inhalation:** Remove person to fresh air.
- Ingestion:** **Do not** induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

HUNTSMAN

ISO 9001
QS 9000

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