

ARclear® 42000/43000 Series OCAs Optical Bonding Applications



ARclear® 42000 and 43000 Series products consist of robust optically clear adhesives (OCAs) designed to weather the most challenging environmental extremes, including high and low temperatures, humidity, and UV exposure. This versatile product range of transfer tapes is capable of gap filling from 12.5 to 250 μm .

Applications for ARclear® 42000 and 43000 Series OCA transfer tapes:

Adhesive Research's portfolio of pressure sensitive adhesives is designed for a broad range of end products including touch sensitive, flexible, curved, and emerging technology displays. Components such as backlights, polarizers, filters, retarders and diffusers, and holographic, anti-reflective and hard coated films are ideal for these products.



Silicone OCAs

- **Low haze, high clarity, and high light transmission.**
- **Provide a broad range of usage temperatures, often function between -70°C and over 250°C.**
- **High adhesion to glass, PMMA and polarizer substrates.**

- **Environmentally durable – resists temperature extremes, humidity, and UV light.**
- **Easy mess-free processing and bonding.**

OPTICAL BONDING

Product	Description	Construction	1st Release Liner (Type/Thickness)	Adhesive (Type/Thickness)	2nd Release Liner (Type/Thickness)	“Peel Adhesion (N/25.4 mm)”	“Optical Properties (%) Haze / Clarity / Transmission”	Refractive Index
ARclear® 42005	ARclear® 42000 Series Addition-cured silicone transfer adhesive for high-performance and stability	TT	Clear/PET/51 µm	Silicone/12.5 µm	Clear PET/102 µm	15 (Glass) / 8 (PC)	0.5 / 99 / 99	1.41
ARclear® 42010		TT	Clear/PET/51 µm	Silicone/25 µm	Clear PET/102 µm	15 (Glass) / 10 (PC)	0.5 / 99 / 99	1.41
ARclear® 42016		TT	Clear/PET/51 µm	Silicone/40 µm	Clear PET/102 µm	20 (Glass) / 16 (PC)	0.5 / 99 / 99	1.41
ARclear® 42020		TT	Clear/PET/51 µm	Silicone/50 µm	Clear PET/102 µm	19 (Glass) / 16 (PC)	0.5 / 99 / 99	1.41
ARclear® 42030		TT	Clear/PET/51 µm	Silicone/75 µm	Clear PET/102 µm	19 (Glass) / 17 (PC)	0.5 / 99 / 99	1.41
ARclear® 42040		TT	Clear/PET/51 µm	Silicone/100 µm	Clear PET/102 µm	22 (Glass) / 19 (PC)	0.5 / 99 / 99	1.41
ARclear® 43040	ARclear® 43000 Series Addition-cured silicone transfer adhesive for ultra-thick applications	TT	Clear/PET/51 µm	Silicone/100 µm	Clear PET/102 µm	22 (Glass) / 23 (PC)	0.5 / 99 / 99	1.41
ARclear® 43060		TT	Clear/PET/51 µm	Silicone/150 µm	Clear PET/102 µm	24 (Glass) / 26 (PC)	0.5 / 99 / 99	1.41
ARclear® 43070		TT	Clear/PET/51 µm	Silicone/175 µm	Clear PET/102 µm	25 (Glass) / 22 (PC)	0.5 / 99 / 99	1.41
ARclear® 43080		TT	Clear/PET/51 µm	Silicone/200 µm	Clear PET/102 µm	28 (Glass) / 22 (PC)	0.5 / 99 / 99	1.41
ARclear® 43100		TT	Clear/PET/51 µm	Silicone/250 µm	Clear PET/102 µm	29 (Glass) / 23 (PC)	0.5 / 99 / 99	1.41
ARclear® 8932EE	Addition-cured silicone transfer adhesive	TT	Clear/PET/51 µm	Silicone/41µm	Clear PET/102 µm	15 (Glass) / 13 (PC)	0.3 / 99 / 100	1.41
ARclear® 44005 (formally ARcare® 93453)	ARclear® 44000 Series Moisture barrier adhesive with strong adhesion to various substrates; Chemically inert with excellent thermo-oxidative and UV stability	TT	Clear/PET/51 µm	Rubber/13 µm	Clear PET/51 µm	6 (Glass) / 13 (PC)	0.1 / 98 / 100	1.52
ARclear® 44010 (formally ARcare® 92734)		TT	Clear/PET/51 µm	Rubber/25 µm	Clear PET/51 µm	17 (Glass) / 18 (PC)	0.4 / 99 / 100	1.52
ARclear® 44110 (formally ARcare® 93378)		TT	Clear/PET/51 µm	Rubber/25 µm	Clear PET/127 µm	17 (Glass) / 21 (PC)	0.4 / 99 / 100	1.52



Types of Tape Construction

Transfer Tape (TT)

Unsupported adhesive is coated directly onto a release liner, allowing transfer films to be the most flexible and conformable of all bonding systems.

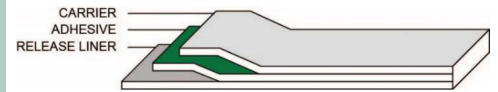
- ✓ Vibration damping
- ✓ Bonds with consistently thin line
- ✓ High strength bonding to a variety of industrial substrates
- ✓ Conforms well to irregular surfaces



Single-Coated Tape (SCT)

Single-coated tapes consist of a backing that is coated on one side with an adhesive. Single-coated tapes are available either in selfwound rolls or with a release liner for ease of application.

- ✓ Ideal for over-lamination
- ✓ Protecting
- ✓ Energy management



Double-Coated Tape (DCT)

Double-coated tapes have a carrier that is coated on both sides with an adhesive, eliminating heat and solvent cure cycles. The instant bonding capabilities of double-coated tapes make them very conducive to automation and high-speed processing.

- ✓ Offers ease of handling
- ✓ Bonding rigid materials to irregular surfaces
- ✓ Compensates for thermal expansion
- ✓ Reduces sound, shock, and vibration
- ✓ Allows use of two different adhesives per application



Heat-activated Film Tape

Heat-activated film tapes require heat and pressure to achieve final bonding to any surface.

- ✓ Ideal for plasticized materials
- ✓ High ultimate bonding strength
- ✓ Conforms to irregular or textured surfaces



High-performance Thin Foam Tape

High-performance thin foam tape is designed for mounting smart devices and other components in various electronics applications.

- ✓ Fill narrow gaps
- ✓ Excellent impact resistance
- ✓ Distribute stress uniformly over the bonded area



About Adhesives Research:

Adhesives Research is a permanently independent developer and manufacturer of adhesives and coatings for various markets.

We utilize our material knowledge, polymer synthesis/formulation expertise, and versatile manufacturing capabilities to supply key components to the industry. We offer robust products and technologies and can also rapidly customize to meet the specific needs of an application.

Headquartered in Glen Rock, PA. Adhesives Research has also sales and manufacturing facilities in Ireland and sales offices in China and Singapore.

To learn more information about how Adhesives Research can help solve tape and materials engineering challenges, contact us today.



Scan me for more details

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