

Product Guide - AmGel® Hydrogel

Our Mission:

Quality Manufacturing

Axelgaard Manufacturing's mission is to deliver high quality and consistent hydrogels. Our AmGel® brand patented hydrogels are used in products worldwide for varied applications.

Ground-breaking Research and Development, advanced industry expertise, and state-of-the-art equipment make Axelgaard one of the most sophisticated hydrogel manufacturers in the world.

Axelgaard is compliant with Good Manufacturing Practices (GMP) and ISO 13485:2016 MDSAP.



We invite you to learn more, connect and collaborate:
www.axelgaard.com | support@axelgaard.com

Our products are patent protected, see:
www.axelgaard.com/PatentList

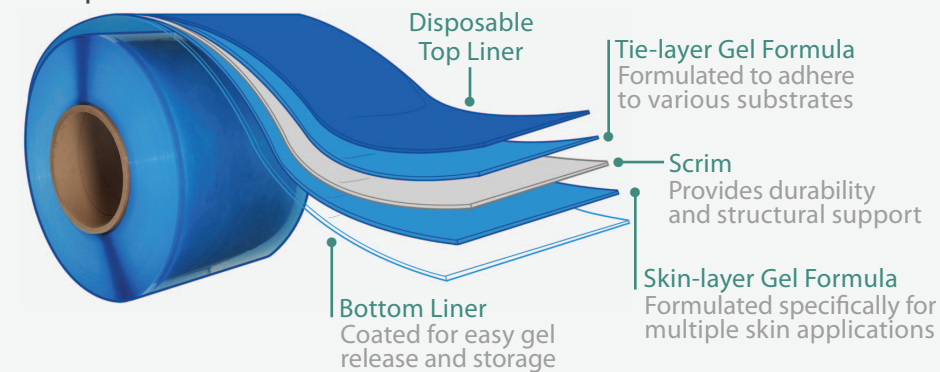
 **AXELGAARD**
MANUFACTURING CO., LTD.

AmGel® Hydrogel

Axelgaard manufactures a full line of AmGel hydrogels in bulk rolls for a variety of applications- such as stimulation, sensing, defibrillation, surgical grounding pads, iontophoretic buffered return electrodes, skin care, wound care, fixation and custom formulations.

Hydrogel Technology

Patented multi-layer adhesive hydrogel formulations eliminate the performance problems associated with single-layer hydrogels. This multi-layer approach ensures maximum durability, longevity, and performance.



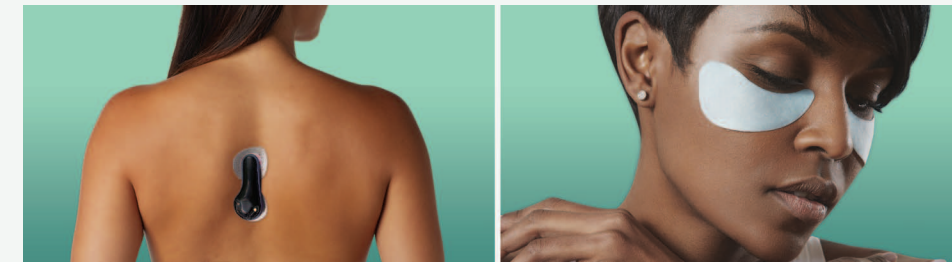
NOTE: Colors and layer thickness are for illustrative purposes only.

Services and Support

- Knowledgeable Engineering and R&D teams with the experience and technical ability to make your specialty product a reality.
- Dispense-And-Cure standard and custom formulated hydrogel for wearable biomedical devices.
- Standard and custom formulated hydrogel pads and tapes for medical products, skin fasteners, cosmetic skincare products, breaching, and more.
- Slitting capabilities to suit customers' specific requirements. The minimum slit width is 0.75" (2 cm).

AG500 Series Hydrogel

AG500 dermal fastener hydrogels are designed and formulated for adhering a product repeatedly to the skin. AG500 hydrogels are high tack adhesive hydrogels which provide a "quick grab" as well as excellent restick capabilities.



PART #	GEL THICKNESS	USABLE WIDTH	ROLL LENGTH
AG535	35 mils (0.9 mm)	9" (22.9 cm)	300' (91 m)
AG548	48 mils (1.2 mm)	9" (22.9 cm)	250' (76 m)

AG600 Series Hydrogel

AG600 sensing hydrogels are designed and formulated for use in electrocardiogram (ECG/EKG), electromyogram (EMG), defibrillation, and wireless monitoring applications. AG600 hydrogels are medium adhesive tack hydrogels with excellent re-adhesion capabilities for skin interface.



PART #	GEL THICKNESS	USABLE WIDTH	ROLL LENGTH
AG625	25 mils (0.6 mm)	9" (22.9 cm)	300' (91 m)
AG635	35 mils (0.9 mm)	9" (22.9 cm)	300' (91 m)
AG640	40 mils (1.0 mm)	9" (22.9 cm)	250' (76 m)

AG700 Series Hydrogel

AG700 stimulating hydrogels are formulated for TENS and muscle stimulation applications. Designed for use with conductive carbon film, AG700 hydrogels are some of the most durable hydrogels on the market and offer optimal bonding to the substrate with multiple applications to skin.



PART #	GEL THICKNESS	USABLE WIDTH	ROLL LENGTH
AG730	30 mils (0.8 mm)	9" (22.9 cm)	300' (91 m)
AG735	35 mils (0.9 mm)	9" (22.9 cm)	300' (91 m)

AG800 Series Hydrogel

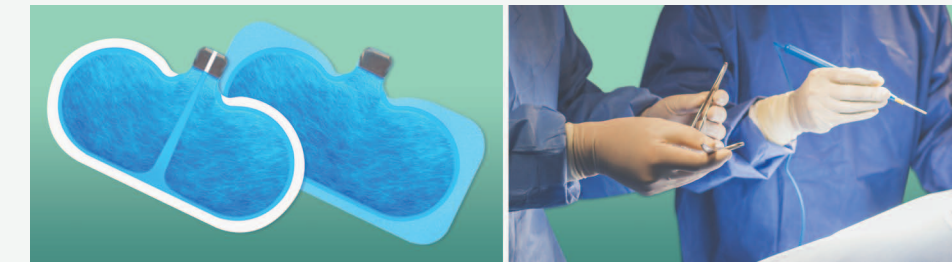
AG800 buffer hydrogels are designed specifically for iontophoresis buffered return electrodes. Through unique buffer technology, AG800 hydrogels offer a stable environment to prevent skin burns and irritation.



PART #	GEL THICKNESS	USABLE WIDTH	ROLL LENGTH
AG835	35 mils (0.9 mm)	9" (22.9 cm)	300' (91 m)

AG900 Series Hydrogel

AG900 grounding hydrogels are specifically designed for use in high frequency grounding pads. AG900 hydrogels feature excellent cohesion, adhesion, and offer corrosion resistance to aluminum.



PART #	GEL THICKNESS	USABLE WIDTH	ROLL LENGTH
AG936	36 mils (0.9 mm)	9" (22.9 cm)	300' (91 m)

AG2500 Series Hydrogel

AG2500 premium multi-use high-tack hydrogels are designed and formulated for a variety of uses, including sensing, stimulation, and fastener applications. These soft and elastic hydrogels exhibit excellent restick and high tack adhesion characteristics.



PART #	GEL THICKNESS	USABLE WIDTH	ROLL LENGTH
AG2530	30 mils (0.8 mm)	9" (22.9 cm)	300' (91 m)
AG2540	40 mils (1.0 mm)	9" (22.9 cm)	250' (76 m)
AG2550	50 mils (1.3 mm)	9" (22.9 cm)	250' (76 m)



FEATURES	AG535	AG548	AG625	AG635	AG640	AG730	AG735	AG835	AG936	AG2530	AG2540	AG2550
Sensing			✓	✓	✓					✓	✓	✓
Defibrillation			✓	✓	✓							
Stimulation			✓	✓	✓	✓	✓			✓	✓	✓
Direct Current / Iontophoresis								✓				
Surgical Grounding Pads									✓			
Fastening	✓	✓								✓	✓	✓
Adhesive Tack	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH	HIGH	HIGH
Gel Thickness	35 mils (0.9 mm)	48 mils (1.2 mm)	25 mils (0.6 mm)	35 mils (0.9 mm)	40 mils (1.0 mm)	30 mils (0.8 mm)	35 mils (0.9 mm)	35 mils (0.9 mm)	36 mils (0.9 mm)	30 mils (0.8 mm)	40 mils (1.0 mm)	50 mils (1.3 mm)
Gel Dimensions	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 250' (76 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 250' (76 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 300' (91 m)	Width - 9" (22.9 cm) Length - 250' (76 m)	Width - 9" (22.9 cm) Length - 250' (76 m)
Top Release Liner	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE	Width - 9.75" (24.8 cm) 2 mil (0.05 mm) LDPE
Bottom Release Liner	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET	Width - 10" (25.4 cm) 5 mil (0.13 mm) PET
Compatible Substrate	Variety of substrates	Variety of substrates	Silver inks, conductive carbon films. Not compatible with foils or metals.	Silver inks, conductive carbon films. Not compatible with foils or metals.	Silver inks, conductive carbon films. Not compatible with foils or metals.	Silver inks, conductive carbon films, and conductive fabrics	Silver inks, conductive carbon films, and conductive fabrics	Carbon films	Aluminum foil	Silver inks, conductive carbon films. Not compatible with foils or metals.	Silver inks, conductive carbon films. Not compatible with foils or metals.	Silver inks, conductive carbon films. Not compatible with foils or metals.
Volume Resistivity [$\Omega \cdot \text{cm}$]	Not Applicable	Not Applicable	400* (≤ 1000)	350* (≤ 1000)	340* (≤ 1000)	1100* (≤ 1500)	1100* (≤ 1500)	24000* (15000-30000)	4200* (≤ 7000)	700* (≤ 1000)	600* (≤ 1000)	550* (≤ 1000)
Process Shelf Life	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months	Non-Slit 1 Year Slit 6 Months



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*Typical values for Volume Resistivity