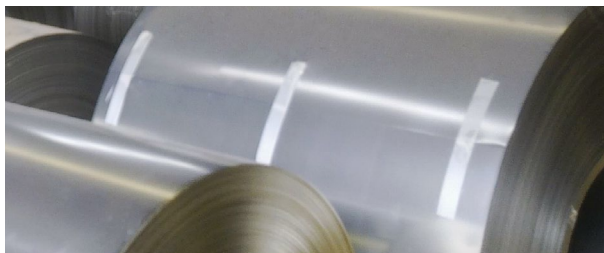


FILAMENT TAPE SALES TOOL



IPG's filament tapes are used in many different applications in various markets. Our filament products exhibit excellent performance characteristics and our manufacturing expertise allows us to build quality into our products. We offer general purpose and specialty filament tapes in both natural rubber and hot melt adhesive to cover the broadest scope of applications.



NATURAL RUBBER FILAMENT

IPG® has the unique capability of manufacturing Natural Rubber Filament (NRF) tape. NRF tape has distinct performance advantages over Hot Melt Filament (HMF) products in specific applications.

- NRF tapes generally have a greater operating temperature range than HMF products
 - Most NRF products have operating temperatures at least 0°F to +200°F/ -17°C to +93°C
 - Most general purpose HMF products have an operating temperature range of +32° to +140°F/ 0°C to + 60°C
- NRF tapes perform better in humid environments
- NR is softer than HM; this allows for a better "quick grab" and better performance in dusty or dirty environments
- NRF performance characteristics such as adhesion and tack may be inferior to HMF products in "normal" environments
- NRF costs, and therefore prices, are generally higher than a similar tensile NRF product. NRF tapes provide value over HMF in many applications so it is imperative to understand the end-use application.
- General purpose NRF products have a PET backing which provides cut resistance and strength as compared to most HMF products which utilize BOPP backing. PET is also more resistant to an outward curl than BOPP products.

APPLICATIONS & INDUSTRIES

IPG's wide range of NRF tapes go into many different applications. Several of the styles are specialty products that are primarily used in distinct applications in specific markets, such as RA6 which is used for splicing in the flooring industry and RG20 which has been used for many years as a clean-removal product in the appliance industry. These applications are typically easy to search out as NRF opportunities; other application spaces for general NRF products, such as RG3, include:

Target Applications

Refrigerated/cold temp. shipping and storage

Packaging/strapping/palletizing/bundling in dusty and dirty environments

Packaging/strapping/palletizing/bundling in humid environments

Industries

Food & Beverage, Meat Processing

Fulfillment, Furniture, General Manufacturing

Fulfillment, General Manufacturing

FILAMENT TAPE SALES TOOL



HOT MELT FILAMENT

IPG® has a wide range of Hot Melt Filament (HMF) tapes. HMF products are a cost-effective solution in applications where there are no benefits to using a natural rubber filament product. Our HMF line includes delamination and transfer-resistant products along with the general purpose tapes that provide the strength needed to meet tough end-user requirements. Many of IPG's HMF tapes are designed to show superior performance in cold-temp applications that you may not expect from HMF products.

RG300 110# *Utility Grade General Purpose HMF*



Key Features/Benefits

- Tensile strength and adhesions on par with competitive utility grade products
- Excellent performance in cold tack applications

Target Applications

General strapping/palletizing/bundling

Cold applications where delamination resistance is not a concern; general strapping/palletizing/bundling in cold environments

Industries

General Manufacturing

Food & Beverage, Meat Processing

RG400 110# *Utility Grade Delamination Resistant HMF*



Key Features/Benefits

- Tensile strength on par with competitive utility grade products
- Excellent delamination resistance
- Superb adhesions to steel, cold tack to steel and cold adhesion to plastic wrap

Target Applications

General strapping/palletizing/bundling/unitizing

Cold applications where delamination resistance may be a concern; general strapping/palletizing/bundling in cold environments

Applications involving "textured" surfaces or lower surface energy: carpet bundling, foam strapping

Industries

General Manufacturing, Automotive

Food & Beverage, Meat Processing

Automotive, Flooring, Trade Show

APL100(B) 100# & APL200 200# *Specialty Delamination & Transfer Resistant HMF*



Key Features/Benefits

- APL100 is a lower tensile transfer-resistant tape that offers a cost savings in cases where the strength of a 200# product like APL200 is not necessary.
- APL100 and APL200 exhibit exceptional quick sticks, adhesion to steel, cold tack to steel and cold adhesion to polydrape. (Operating temperature range -25°F/-32°C to +140°F/+60°C)
- APL100B is a blue product that may be used for identification purposes in customer applications

Target Applications

Cold applications where delamination resistance and transfer resistance is a concern

Applications that employ use of polybags/polydrape; holding Gaylord liners

Non-critical clean-removal (transfer-resistant) applications (coil tabbing, temporary holding)

Industries

Food & Beverage, Meat Processing

Food & Beverage, Meat Processing, General Manufacturing

Appliance, Window & Door, Metal

FILAMENT TAPE SALES TOOL



HOT MELT FILAMENT

RG303 130# *Medium Grade General Purpose HMF*



Key Features/Benefits

- Tensile strength on par with competitive medium grade products
- Superior quick stick and adhesions
- Remarkable cold tack to steel

Target Applications

General strapping/palletizing/bundling
Cold applications where delamination resistance is not a concern and medium tensile strength is required; general strapping/palletizing/bundling in cold environments

Industries

General Manufacturing
Food & Beverage, Meat Processing

RG316 350# *Premium Grade General Purpose HMF*



Key Features/Benefits

- Tensile strength on par with competitive premium grade products
- Superior quick stick and adhesions
- Remarkable cold tack to steel

Target Applications

General strapping/palletizing/bundling when a high-tensile strength product is needed
Reinforcing corrugate totes
Metal splicing and metal coil tabbing

Industries

General Manufacturing
Food & Beverage
Metal

Filament Style Quick Reference Guide

	STYLE	TENSILE (lbs/in)	ADHESION TO STEEL 90°	BACKING	FILAMENT	TOTAL THICK (mil)	ELONGATION (%)
Natural Rubber Filament Products							
Medium	RG3	131	41	PET	Fiberglass	4.9	3.0
	RG15	175	39	PET	Fiberglass	5.6	4.0
	RG12	270	38	PET	Fiberglass	6.0	4.2
	RP3	274	40	PET	PET	9.2	30.0
Premium	783 (black)	333	37	PET	Fiberglass	8.0	4.5
	RG16	333	36	PET	Fiberglass	7.5	4.5
Specialty	RG22	253	46	PET	Fiberglass	7.0	4.0
	RG20	370	40	PET	Fiberglass	9.5	4.0
	RA6	107 Mach 94 Cross	60	Crepe	Fiberglass	12.4	4.0
Hot Melt Filament Products							
Utility	RG286	95	63	BOPP	Fiberglass	4.0	3.0
	RG300	110	63	BOPP	Fiberglass	4.0	3.5
	RG400	110	80	BOPP	Fiberglass	5.0	3.5
Medium	RG303	150	49	BOPP	Fiberglass	4.2	3.0
	RG315	175	49	BOPP	Fiberglass	4.2	4.0
	RG319	175	49	BOPP	Fiberglass	5.2	4.0
Premium	RG316	350	77	BOPP	Fiberglass	6.2	4.0
Specialty	745	90 Mach 90 Cross	75	PET	Fiberglass	7.3	3.5
	APL100	100	85	BOPP	Fiberglass	5.6	4.0
	APL100B	100	85	BOPP	Fiberglass	5.6	4.0
	APL200	200	107	BOPP	Fiberglass	6.9	4.0