

polyram

creative thermoplastic compounds



Polyram Ram-On Industries

- About Polyram
- Bondyram ®
- Bondyram ® -Tie Layers



About Polyram



[About](#)

[Agents & Distributors](#)

[Quality Standards](#)

[Gallery](#)



- **A publicly traded independent compounder, located in Ram-On, a small village in the north of Israel, not far from Haifa Harbor and near the city of Nazareth.**

Previous

Next

Map



About Polyram

About | [Agents & Distributors](#) | [Quality Standards](#) | [Gallery](#)

- Polyram was established in 1986 and today is the **main supplier of engineering compounds to the Israeli market.**
- Polyram operates **24 twin-screw lines** in a **16,000m²** production/warehousing area with a **capacity of 42,000T/Y.**
- Polyram went public in 2004.

Financial reports available in the Tel-Aviv stock exchange: www.tase.co.il

Previous

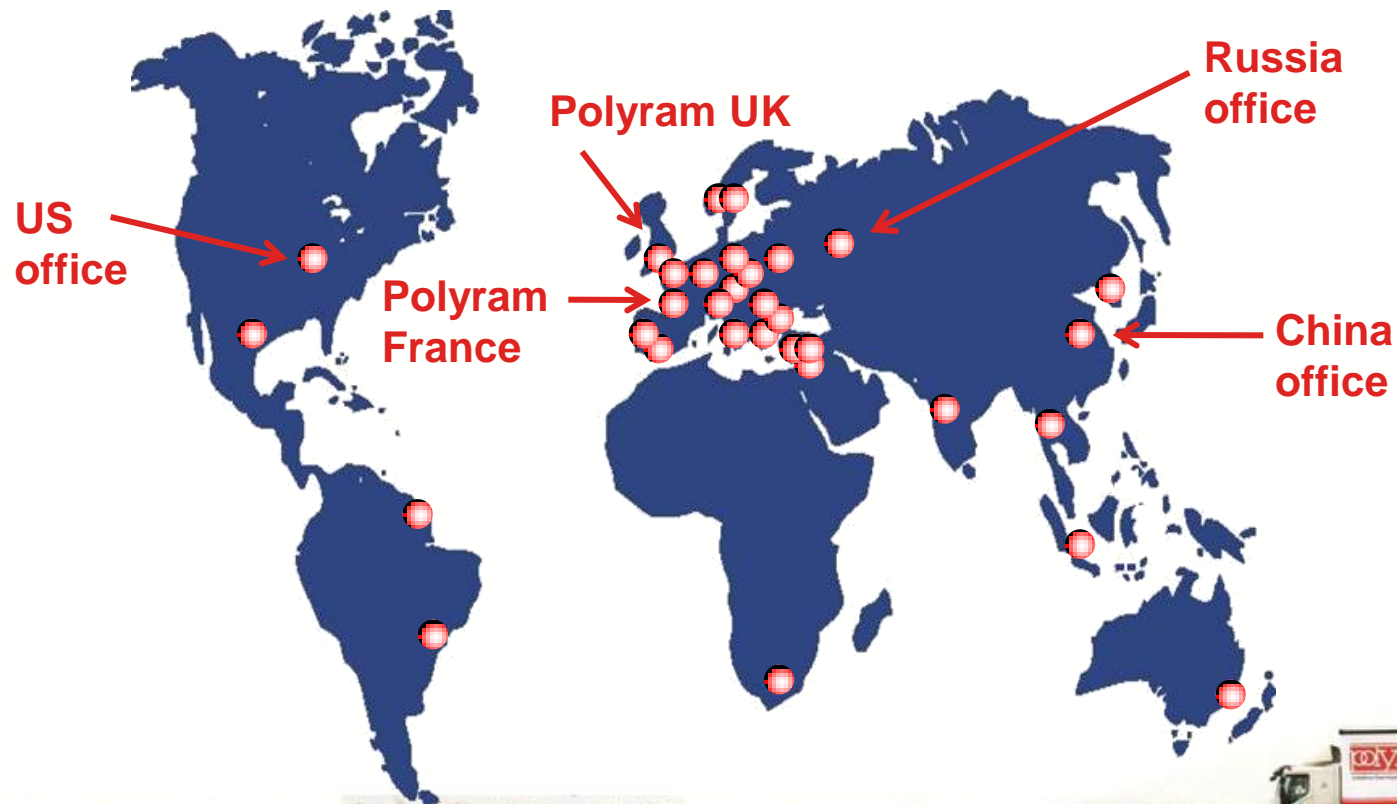
Next



About Polyram

[About](#) | [Agents & Distributors](#) | [Quality Standards](#) | [Gallery](#)

- Agents and Distributors Worldwide:



About Polyram

[About](#) | [Agents & Distributors](#) | [Quality Standards](#) | [Gallery](#)

- Polyram holds the highest quality control standards:

ISO-9001



ISO TS 16949



NSF-61



WRAS



UL94



About Polyram

polyram

[About](#)

[Agents & Distributors](#)

[Quality Standards](#)

Gallery



Previous

Next

About Polyram

polyram

[About](#)

[Agents & Distributors](#)

[Quality Standards](#)

[Gallery](#)



Previous

Next

About Polyram

polyram

[About](#)

[Agents & Distributors](#)

[Quality Standards](#)

[Gallery](#)



Previous

Next

About Polyram

[About](#)

[Agents & Distributors](#)

[Quality Standards](#)

[Gallery](#)



Previous

Next

About Polyram



[About](#)

[Agents & Distributors](#)

[Quality Standards](#)

Gallery



Previous

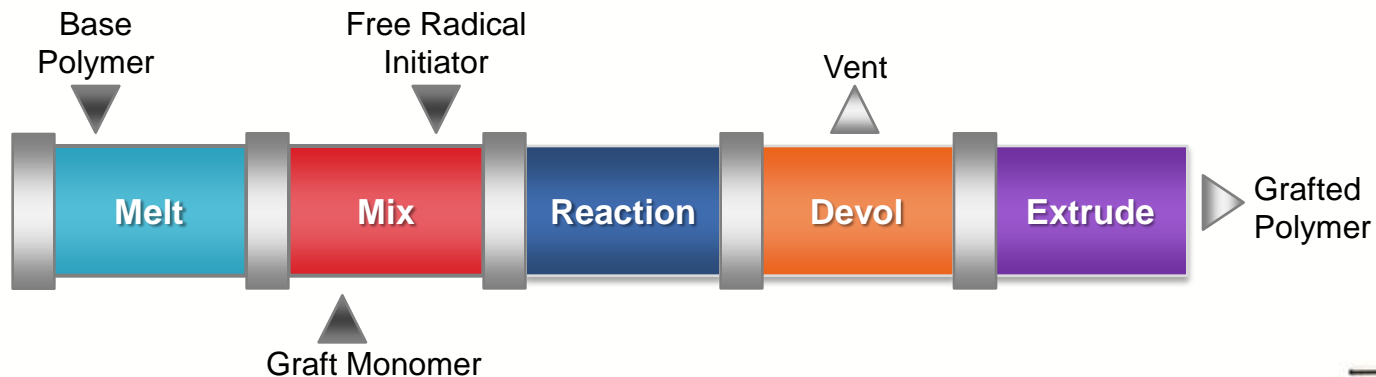
Next

Bondyram [®]

- The Bondyram division operate **6 reactive extrusion lines**(twin screw co-rotating).
- Total capacity of **7,500T/Y.**

The Bondyram products are Maleic Anhydride grafted olefins:

- **Coupling agents.**
- **Compatibilizers.**
- **Impact Modifiers.**
- **Tie-Layers.**



Bondyram®

polyram

Bondyram® advantages:

- The products are valid in the market **since 2002.**
- Polyram lease relevant patents cover North America, Germany, France, Great Britain and Japan for the PP grades.
- **No export duties** between Israel and Europe or North America
- **No import duty** in Israel.

Previous

Next



Bondyram ®

olyram

More advantages:

- The product **pre-registered** in the European REACH.
- **Available** in warehouses **all over the world**, including USA, Canada, Mexico, UK, China and Europe.
- Food contact compliances to the US FDA 21CFR 175.105 and the European EU Directive 2002/72 (under specific limit).
- **ISO-TS quality system** approved for the automotive market.

Previous

Next



Bondyram ®

polyram

Polyram Lab Analysis and Quality Control Lab:

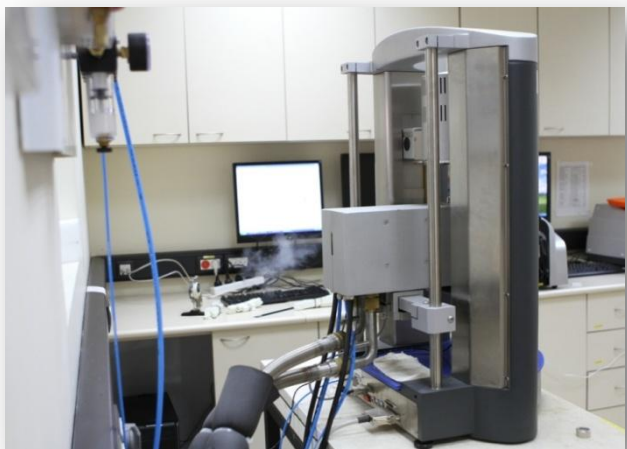


Previous

Next

Bondyram [®]

Polyram Lab Analysis and Quality Control Lab:

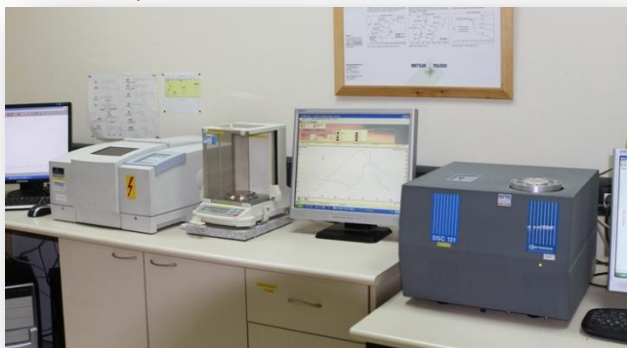


DMA



UV-VIS Spectro Photo Meter

FTIR, DSC



Bondyram®

Bondyram® Packaging:



PE
bags

Big Bags

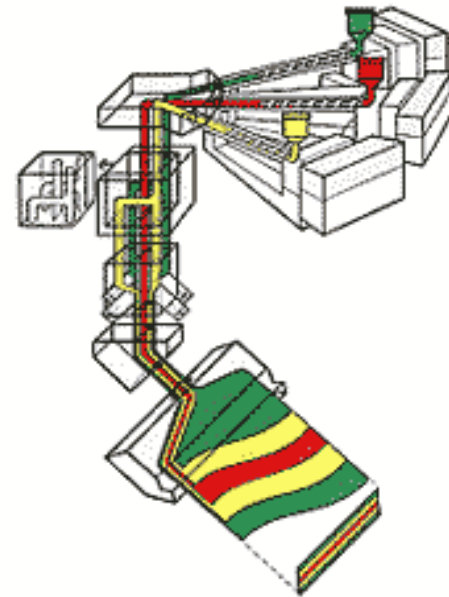


Carton Boxes

Bondyram® - Tie Layers

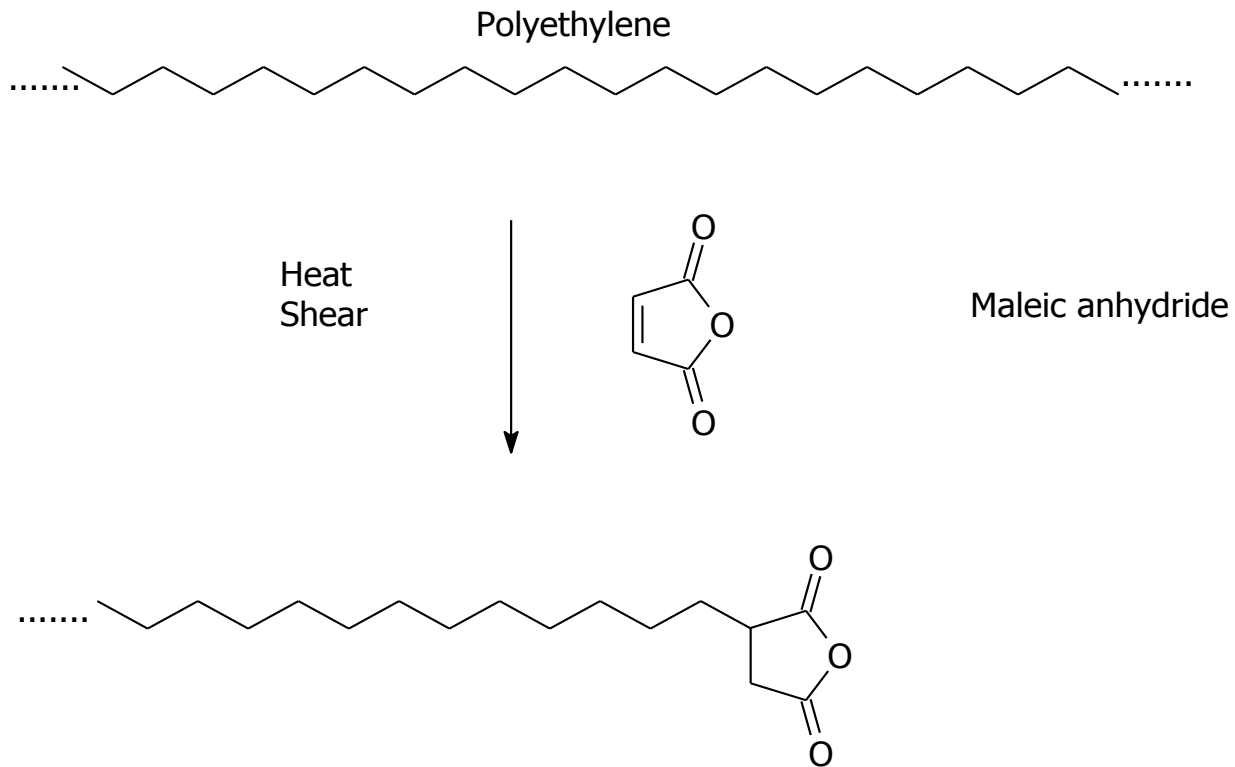
Bondyram® TL - Adhesive Resins:

- Adhesive resins used as tie layer in **coating and co- extrusion applications** food packaging and industrial use.
- Rheology and high mechanical properties is the key for good adhesion performance.



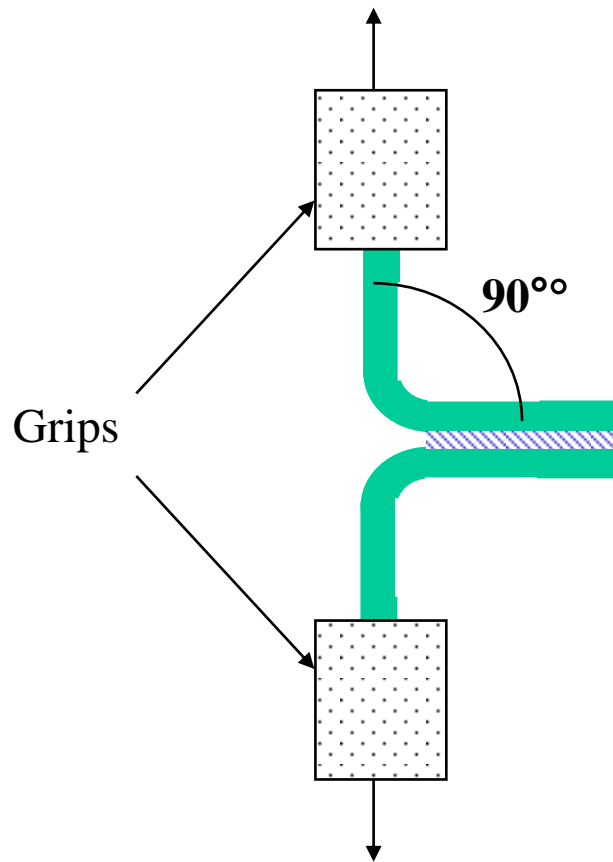
Bondyram® - Tie Layers

Maleic Anhydride grafting:



Bondyram [®] - Tie Layers

Testing Tie Layer Performance:

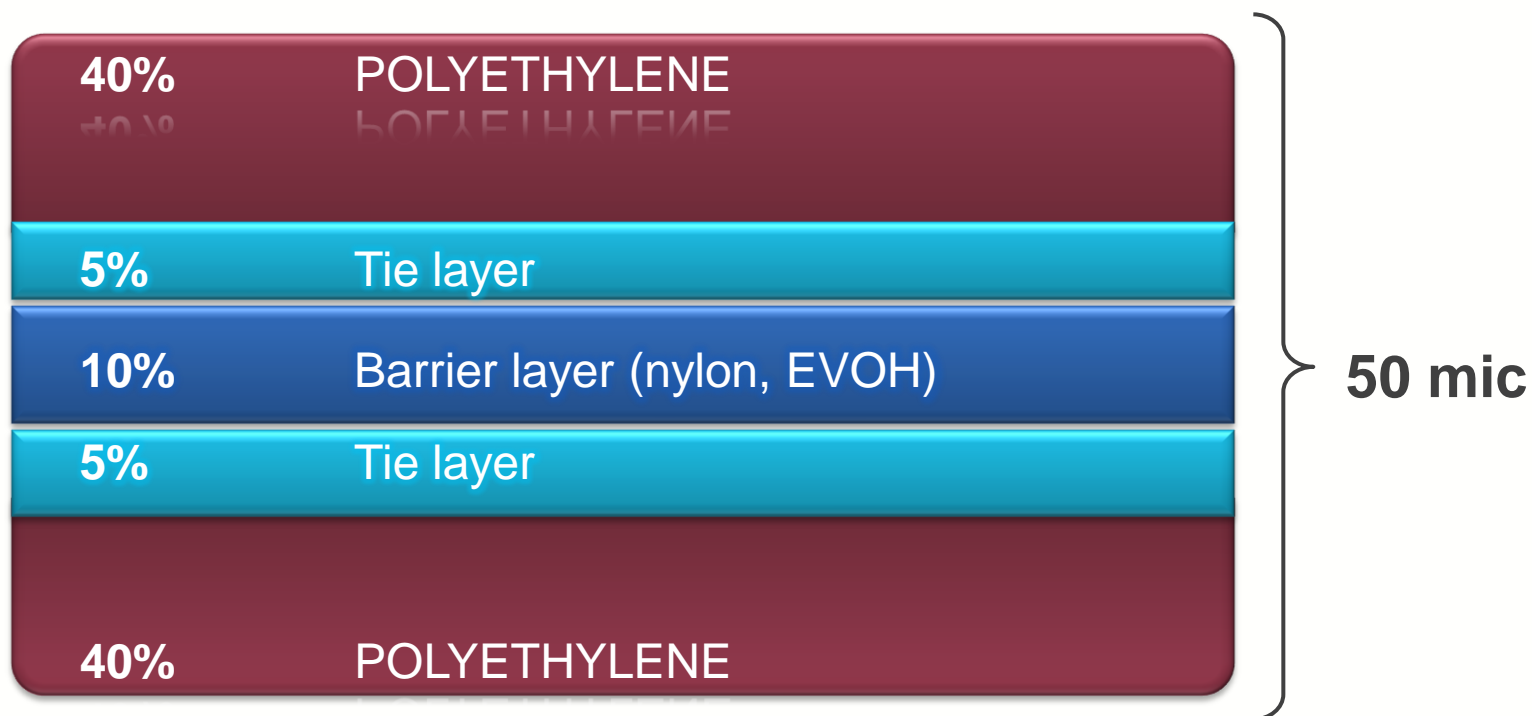


Peel Strength Measurement



Bondyram ® - Tie Layers

Typical Co Extruded structure:



Bondyram ® - Tie Layers

Application:

PP

Tie layer

EVOH

Tie layer

PP

- The technology is Blow molding of multilayer co-extrusion Tube.
- The structure is rigid with oxygen barrier for long shelf life of **Tomato sauce** (Ketchup).
- Bondyram **TL 1306**.

PP- Bottles:



Bondyram ® - Tie Layers

Application:

PE /HDPE

Tie layer

EVOH

Tie layer

PE/HDPE

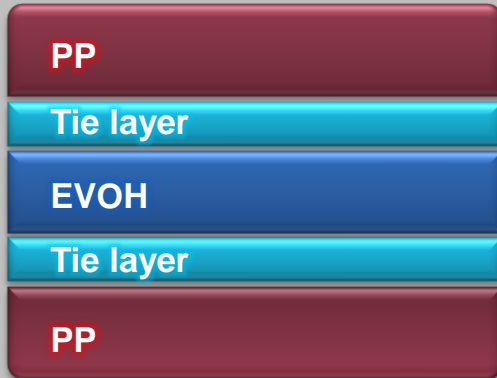
- The technology is Blow molding of multilayer co-extrusion Tube.
- The structure is rigid with oxygen barrier for long shelf life of **agricultural chemicals.**
- Bondyram **TL 4101B.**

PE- Bottles:



Bondyram ® - Tie Layers

Application:



- The technology is Co-extrusion film for thermoforming packaging.
- The structure is rigid with oxygen barrier for long shelf life of **meat and Cheese**.
- Bondyram **TL 1207**.

PP - film for thermoforming:



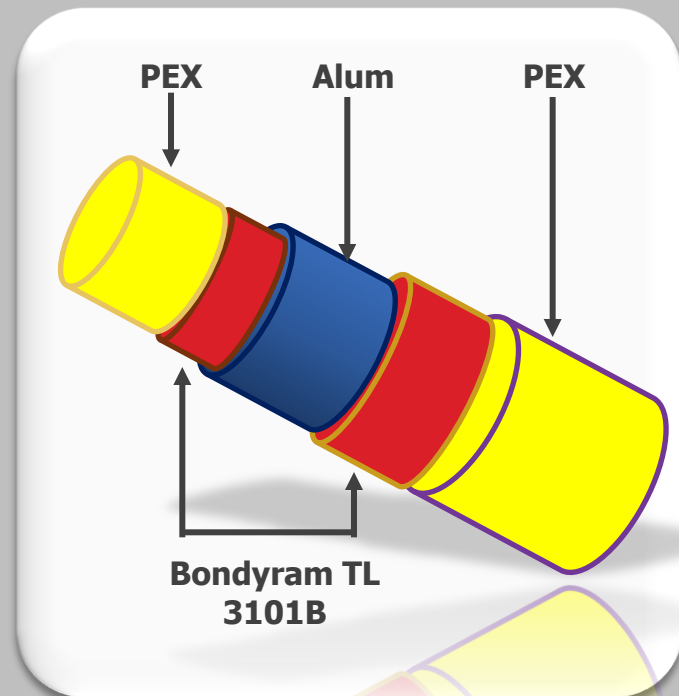
Bondyram® - Tie Layers

Application:



- The technology is Co-extrusion and coating of **PEX-Pipes with aluminum foil.**
- The structure is rigid oxygen barrier Pipes **hot water.**
- Bondyram **TL 4101A / TL 3101B**

Multi Layer X-link PE Pipes:



Bondyram ® - Tie Layers

colyram

Application:

PP

Tie layer

PA

Tie layer

PP

- Multi layer blow film Coex for **agricultural** applications and **fresh vegetables packaging**.
- Bondyram **TL 1306 / TL 1106**

Multi Layer PP Films:

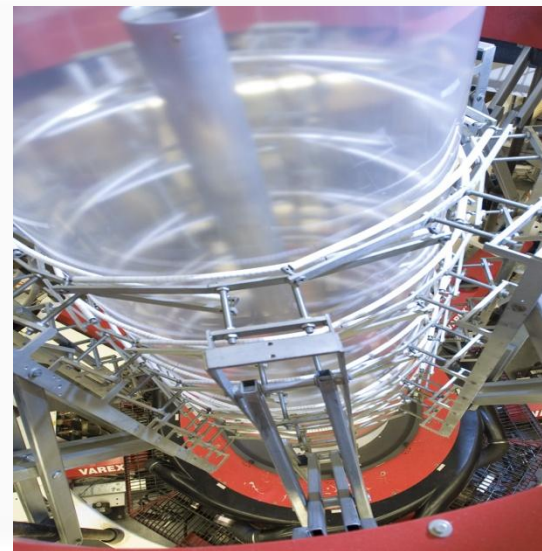


Bondyram ® - Tie Layers

Application:



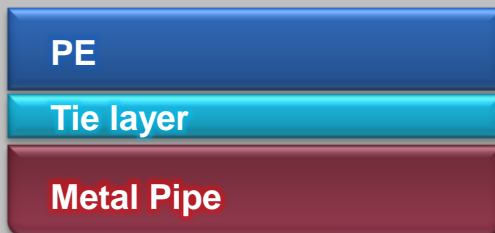
High Barrier Multi Layer Films



- Bondyram **4108/4109E** – MA Grafted LLDPE used as concentrated in CoEx Films application.
- Recommended dosage of **10% - 40%** in the adhesive layer to create adhesion between **PE** and Barrier resins such as **EVOH** and **Nylon**.

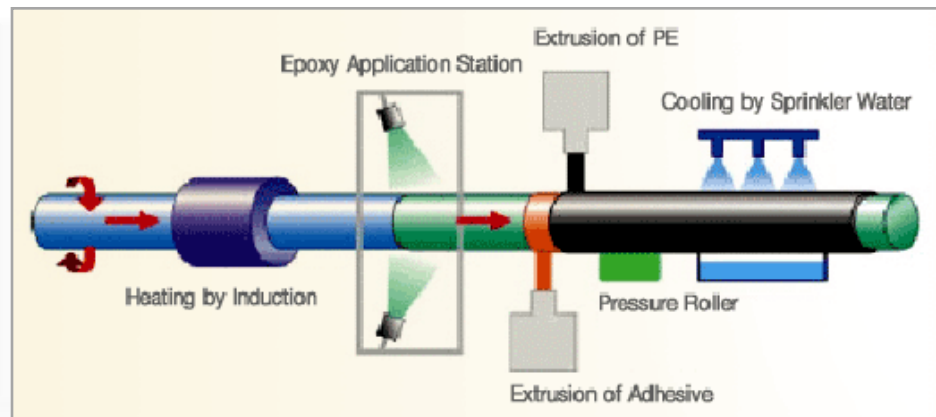
Bondyram® - Tie Layers

Application:



- Bondyram **TL 4101A**
- Bondyram **TL 4101E**

Metal Pipes anti rust PE coating:



Bondyram ® - PE Tie Layers

Physical Properties :

Item	ASTM Test Method	Unit	TL 4101A	TL 4101B	TL 4108	TL 4109E
MFR (190°C)	D1238	g/10min	4	2	1.5	2
Density	D1505	g/cm ³	0.92	0.92	0.91	0.9
Shore Hardness	D2240	D scale	50	45	45	40
Vicat Softening Point	D1525	°C	100	93	98	85
Melting Point	D3418	°C	127	120	122	117

Bondyram [®] - PE Tie Layers

Bondyram TL 4108 , Bondyram TL 4109E

Dilution Recommendation :

	≤50 Mic Bondyram concentration	≥50 Mic Bondyram concentration	≥70 Mic Bondyram concentration
EVOH	50%-30%	40%-20%	30%-15%
Polyamide	20%-10%	12%-10%	10%

Bondyram® - Tie Layers



Basic Bondyram TL-

Adhesive Resins Polyethylene (PE) Type:

Property	Bondyram TL 4101A	Bondyram TL 4101B	Bondyram TL 4101C	Bondyram TL 3101B
Base Polymer	HDPE	LLDPE	LLDPE	HDPE
MFI g/10min	4	2	1	2
Melting Point C	127	120	122	130
Multi Layer Application	PEX/EVOH	PE/EVOH	PE/PA	PEX/AL
Offset	ADMER NF468 Bynel 4105	ADMER NF408 Orevac 18360 Plexar PX3236 Bynel 41E766	Bynel 41E850 Bynel 4104	Plexar 3216

Bondyram ® - PP Tie Layers

Physical Properties :

Item	ASTM Test Method	Unit	TL1207	TL1306
MFR (230°C)	D1238	g/10min	4.5	2.8
Density	D1505	g/cm ³	0.9	0.9
Shore Hardness	D2240	D scale	55	60
Vicat Softening Point	D1525	°C	132	148
Melting Point	D3418	°C	167	160

Bondyram® - Tie Layers



Basic Bondyram TL-

Adhesive Resins Polypropylene(PP)Type:

Property	Bondyram TL 1106	Bondyram TL 1207	Bondyram TL 1306
Base Polymer	Random Co- Polymer PP	Co-Polymer PP	Homo Polymer PP
MFI g/10min	5	4.5	2.7
Melting Point C	145-154	160	167
Multi Layer Application	PP/EVOH PP/PA PP/AL	PP/EVOH	PP/EVOH
Offset	ADMER QF551E	Plexar 6005	ADMER QB510

polyram

creative thermoplastic compounds

www.polyram.co.il

Polyram Ram-On industries
Moshav Ram-On
M.P. MEGIDO 19205
ISRAEL
TEL: 972 4 6599900
FAX: 972 4 6499763
binyamin@polyram.co.il



Thank you!