

PVC FOAM Sheets

PET Sheets PS Sheets



Corporate Vision

M&T Group is a global that focus its customer wills locally. Personal care, dynamic team, flexible delivery conditions, fast responsiveness, respect for nature and humanity are just some features target customer service.

M&T Plastech proudly focuses its efforts to serve its customers with ambitious terms of quality, reliability and expertise with its standard range and customized sheets.

M&T Displays being Europe's leader supplier in the world of Displays, have been investing for years in plastics technologies, sharing its expertise with all fields of application; architecture, sign, home, decoration.

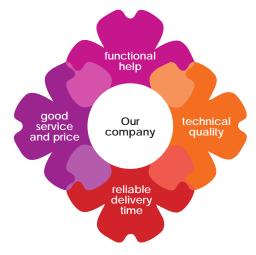
It continuously works on new products and searching for the most cost-effective solutions by investing in machinary and infrastructure.

M&T Plastech is one of the Europe's largest producer of **PVC FOAM**, **PET and PS (HIPS)** sheet materials.

Co-extrusion is available up to five layers. This offers you exceptional opportunities for specifying the material combinations that will produce the mechanical, chemical and physical properties, surface finish, colour and environmental performance you need.

Our trained, dedicated and experienced staff operate the most advanced machinery at strict standards.





Company Principles

M&T Plastech's main principle is based on creating customer confidence by providing the best service from the point of getting the order until the delivery.

Company environment works in relation with functional help, technical quality, reliable delivery time, good service and price. The principle idea is to work hard over the years to develop long-term relations based on mutual loyalty, integrity and respect.

The central focus of the business is to offer Plastech partners the following opportunities; a flexible partnership by a family-run company, supply through trade partners only, conditions in line with market terms, continuous contact, reliable information and guidance from sales executive team and representatives in all deals such as the best available leadtimes and most competitive inquiries.







Factory Management







Service and Quality

In all management and development work at our factories, we set very high quality standards. As an important element in our overall quality work in production, distribution and service, MT Group is certificated with the ISO 9001:2015 quality standards.

The production of our Plastic Extrusion Lines features a high degree of quality awareness. Well trained and skilled staff carefully monitors the extruding process.

Utilizing prospective of the SAP ERP system we manage to strengthen the coordination among our plants and Head Quarters and to improve the control of operations.

Our Research and Development Department continuosly creates unique solutions to meet the demands of this growing and evolving market and help to maintain the leadership of MT Group in providing the best customer service to our valuable partners.

M&T core value emphasizes that; top product quality is an important strategic advantage. Thus, attention to detail is invested at every stage - from selection of the highest-quality raw materials to inspection of finished products before delivery - to ensure full customer satisfaction.









PVC Foam Sheets

PVC Foam Line has two parts to produce PVC Foam Sheets from 1 mm to 19 mm thickness and from 1560 mm to 2050 mm width. First part of this line is for dry PVC blend preparation purpose for different formulas. Second part is the line to produce PVC Foam sheets with different width dies and different thicknesses. Line has also been equipped with a movable saw to cut the sheets. All equipments controlled by High Technologic PLC control sysytems for to increase Quality and Machine Speed. M&T Plastech has 4 extrusion lines one from Cincinati and 3 from Krauss Maffei with a dozing unit from AZO.

It has 3 dies:

Die	Die Width Lips Lips Thickness					
1	2050 mm	2	1-6 mm / 6-12 mm			
2	1560 mm	3	1-6 mm / 6-12 mm / 12-19 mm			
3	1220 mm	3	1-6 mm / 6-12 mm / 12-19 mm			

Each has 900 kg/hour max. capacity. All the lines have the ability of covering PE protection sheet on one side or optionally both sides of PVC Foam with cold lamination units.

Operating Processes



















Quality options:

Plastech, avarage density 0,50 gr/m³. Neo Plastech, avarage density 0,45 gr/m³. Plasteco, avarage density 0,40 gr/m³.

Composition: Vinyl chloride.



Protective Film

- PE film on one side as standard.
- No branding over the film.
- Digital marking of sizes over on long side.

Tolerance Fixed for Each Thickness

- -0 to +2 mm on width.
- -0 to +10 mm on length.
- Rectangularity is max. 2 mm per meter.

Tolerance in Thickness

- +/-0.15 mm for 1-2 mm thickness
- +/-0.15 mm for 3-6 mm thickness
- +/-0.30 mm for 8-10 mm thickness
- +/-0.50 mm for 15-19 mm thickness

Special Features on Request

- Additional thicknesses
- Non standard sheet dimensions.
- Protective PE film on both sides
- Cut-to-size online and offline.

Application Areas:

Signs Digital Printing Silk screen printing Construction Industry Shop Fittings **Health Sector Furniture Sector** Sandwich Panels Wall Coverings Lamination

Features:

- Excellent insulator
- Good dimensional strength
- High impact strength
- •Smooth surface
- Suitable for printing
- Machinable
- Long durability
- Optional Colours

^{*}Tolerances are measured for on-line cutting



PVC Foam Colour White

F	PRODCUTS AV	PALET QUANTITIES FOR			
	WH	HITE	BLACK	ONLY TRUCK	DELIVERIES
Thickness mm	1560x3050 2050x3050		1560x3050	1560x3050	2050x3050
1	~	~		250	200
2	~	•		200	150
3	~	~	~	120	100
4	~	~		100	80
5	~	~	~	80	60
6		~		60	60
8	~	~		50	40
10	~	~		40	40
15*	•			30	
19*	•			25	

^{* 15} mm and 19 mm are available only from stock, are not produced on order. *** Other thicknesses are produced on order (subject to moq).

Physical Properties of PVC Foam

Test	Test Method	Units	Avarage Result
Specific Gravity	In-House	g/cm3	0.50 - 0.70
Determination of Water Absorption	ISO 62:Method 1	%	0.19
Tensile Strength at Yield	ISO R527	MPa	19.37
Elongation at Break	ISO R527	%	17.89
Flexural Modulus	ISO 176	GPa	0.903
Charpy Impact Strength	ISO 179	kjm-2	14.3
Shore D Hardness	ISO 868	for 1-6mm Value	40 - 47
		for 8-10mm Value	45 - 47
Heat Distortion Temperature	ISO 75:Method A	C 0	57.75
	ISO 75:Method B	C 0	68.4
Cofficient of Linear Expansion	In-House	C 0 -1	0.498x10.6

Fire Classification

Test	Test Method	Units	Avarage
Fire classification 3 mm & 5 mm	EN 13501-1	Class	C-S3,d1





Neo Plastech Sheets

New dimension in PVC Foam

- Bright White
- Recommended for direct printing.
- Standard single side protective film.
- 1560 x 3050mm, 2050 x 3050mm standard sheet dimension.
- From 2 mm to 10 mm thicknesses available.
- Optimum Density.
- Best priced bright white printable PVC Foam
- Average density 0,45 gr/m3.

Operating Processes





















Application Areas:

Signs Digital Printing Silk screen printing Construction Industry **Shop Fittings** Health Sector Furniture Sector Sandwich Panels Wall Coverings

Features:

- Excellent insulator
- Good dimensional strength
- High impact strength
- Smooth surface
- Suitable for printing
- Machinable
- Long durability
- Optional Colours

Protective Film

- PE film on one side as standard
- No branding over the film
- Digital marking of sizes over on long side

Tolerance Fixed for Each Thickness

- -0 to + 2 mm on width
- -0 to + 10 mm on length
- Rectangularity is max 2mm per meter

Tolerance in Thickness

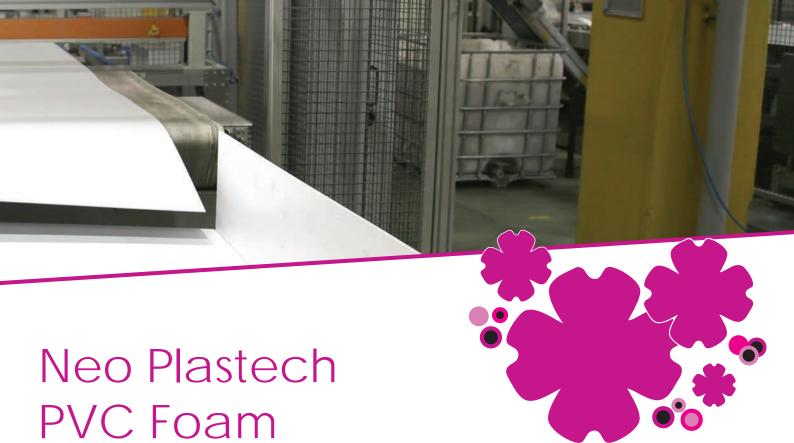
- +/-0.15 mm for 3-6 mm thickness
- +/-0.30 mm for 8-10 mm thickness

Special Features on Request

- Additional thicknesses
- Non standard sheet dimensions are available
- Protective PE film on both sides as required, surcharge +0.20€/m2
- Cut-to-size available on-line and off line.



^{*}Tolerances are measured for on-line cutting



NEO Plastech PVC Foam Colour White

	PF	RODCUTS AVA	PALET QUANTITIES FOR ONLY TRUCK DELIVERIES					
Thickness mm	1220x2440	0 1220x3050 1560x3		2050x3050	1220x2440	1220x3050	1560x3050	2050x3050
2	~	~	~	~	200	200	200	150
3	~	•	~	•	150	150	140	120
4			~	•	140	140	120	100
5	✓	v	~	•	120	120	100	80
6				•	80	80		70
8	~	•	~	•	60	60	60	50
10	~	•	~	~	50	50	50	40

Physical Properties of PVC Foam

Test	Test Method	Units	Avarage Result
Specific Gravity	In-House	g/cm3	0,45
Determination of Water Absorption	TS ISO 62:Method 1	%	0.20
Tensile Strength at Yield	ISO R527	MPa	10,54 - 11,13
Elongation at Break	R527	for 3 mm	12
	R527	for 5 mm %	20
	R527	for 10 mm %	29
Heat Distortion Temperature	ISO 75 Method A	for 3 mm C	59
	ISO 75 Method B	for 3 mm C	65
	ISO 75 Method A	for 5 mm C	59
	ISO 75 Method B	for 5 mm C	66
	ISO 75 Method A	for 10 mm C	58
	ISO 75 Method A	for 10 mm C	66
Charpy Impact Strength	ISO 179	kJ/m²	9,3
Shore D Hardness	ISO 868	for 1-6 mm	40 - 47
		for 8-10 mm	45 - 47



Fire Classification

Test	Test Method	Units	Avarage
Fire classification 3 mm	EN 13501-1	Class	C-s2,d0
Fire classification 5-10 mm	EN 13501-1	Class	C-s3,d0
Fire classification 3-5-10 mm	DIN 4102	Class	B1
Fire classification 3-5-10 mm	NF P92	Class	M1





Plasteco Sheets

- Optimum Whiteness.
- Suitable for signage application
- Single side protective film.
- 2050 x 3050mm standard sheet dimension.
- 2,5 mm to 9 mm thickness available.
- Low Density.
- Best priced white PVC Foam.

Operating Processes











Protective Film

- With or without protection film.
- No branding over the film.
- Digital marking of sizes over on long side.
- Density 0,40g/cm³
- · Limited with stock
- No branding over the film
- Digital print batch number on long side when with protection film

Application Areas:

Signs

Silk screen printing Construction Industry **Shop Fittings Health Sector Furniture Sector** Sandwich Panels Wall Coverings

Features:

- Excellent insulator
- Good dimensional strength
- High impact strength
- •Smooth surface
- Machinable
- Long durability
- Optional Colours





Plasteco **PVC Foam**

Plasteco PVC Foam Colour White

PRODC	CUTS AVAILAE	PALET QUANTITIES FOR ONLY TRUCK DELIVERIES			
Thickness mm	1560x3050	2050x3050	1560x3050	2050x3050	
2,5	~	~	175	150	
3	~	~	140	120	
4,5	~	~	120	100	
5	~	~	100	80	
9	~	~	60	50	

^{*} With or without protection film.

Physical Properties of PVC Foam

Test	Test Method	Units	Avarage Result
Specific Gravity	In-House	g/cm3	0,40
Determination of Water Absorption	TS ISO 62:Method 1	%	0.30
Tensile Strength at Yield	ISO R527	MPa	9,11 - 8,58
Elongation at Break	R527	%	12
Heat Distortion Temperature	ISO 75 Method A	С	43,2
	ISO 75 Method B	С	51,2
Charpy Impact Strength	ISO 179	kJ/m²	5
Shore D Hardness	ISO 868	-	36 - 40
Vicat Softening Tempera Ture	ing Tempera Ture TS EN ISO 306 Method A 50		64,8 - 65,5









PET Sheets

PET line has been equipped with one 75 dia main and one 45 dia co-extruders. It is a Battenfeld machine with a max. capacity about 500 kg/h as from 300 microns to 1500 microns. Surface options are; mat/gloss, gloss/gloss and also transparent & colored alternatives are available. Maximum width is 1400 mm.

At PET sheet line a very accurate Maxson Sheet Sizing Unit has been engaged as well. In addition to this, a 1 ton and 1 mm diameter capacity roll winder and 8 pieces slitter are staying at stand-alone form to wind and slit the sheets for packaging industry. This machinery has been fed from full automatic crystallizer and dry air drier from Colortronic-Germany. A lot of alternative polymer sheets with antiblock-antislip agent, UV stabilizer, optical brightener additives possibilities are available. PET line has both sides cold lamination units for protective film application and also has hot lamination for different sheet extrusion alternatives. For colour options please contact with our sales executives.

Features:

- Good dimensional strength
- High impact strength
- Good heat resistance
- Good toughness even at low temperatures
- Good creep resistance
- Machinable
- •Low friction and high abrasion resistance
- High dimensional stability
- Good electrical insulating properties
- High tracking resistance
- Low water absorbtion
- Physiologically acceptable
- Suitable for thermoforming
- Resistant to water at room temperature, dilute acids, neutral acidic salts, alcohol, ethers, oils, fats, percholated, aromatic and aliphatic hydrocarbons
- Resistant to stress cracking
- Resistant to weathering and hot air
- Burns with black smoke with a sweet aromatic smell

Operating Processes



Composition:

PET is an abbreviation of Polyethylene Terephthalate. Chemical composition is (C10H8O4)n

Special Features on request:

- Corona treatment
- Silicone treatment
- Anti-statik treatment
- Online or offline cutting
- UV treatment
- Available on reel

Application Areas:

Signs
Food Packaging
Vacuum forming
Printing
Stationary
POS stands
White Goods Equipments
Construction Equipments





Physical and Chemical properties:

Test	Dimension	Standard	Value
Density	g/cm3	DIN EN ISO 1183	1,34
Modulus of elasticity (tensile)	Мра	DIN EN ISO 527-3, 1B/50, 1 mm/min till 5 Mpa, in direction of production	2460
Tensile stress at yield	Мра	DIN EN ISO 527-3, 1B/50, 1 mm/min till 5 Mpa, in direction of production	41,5
Elongation at yield	%	DIN EN ISO 527-3, 1B/50, 1 mm/min till 5 Mpa, in direction of production	2,3
Breaking strength (20 °C)	MPa	DIN EN ISO 527-3, 1B/50 in direction of production	31,8
Elongation at break	%	DIN EN ISO 527-3, 1B/50 in direction of production	15,3
Modulus of elasticity (flexion)	MPa	DIN EN ISO 178, 2 mm/min till 1,5%, then 10 mm/min	2250
Flexural strength at 3.5 % flexion	MPa	DIN EN ISO 178, 2 mm/min till 1,5%, then 10 mm/min	61,5
Flexural strength , maximum	MPa	DIN EN ISO 178, 2 mm/min till 1,5%, then 10 mm/min	64,8
Impact strength at +23 °C	KJ/m2	DIN EN ISO 179-1/1eU, in direction of production, support distance	89,7
		62 mm, 4 Joule Hammer	
Impact strength notched at +23 °C	KJ/m2		21,6
		DIN EN ISO 179-1/1eU, in direction of production, support distance	
Vicat softening point	KJ/m2	62 mm, 0,54 Joule Hammer and 1 Joule hammer (ABS)	95
Water vapor permeability	g/(m2d)	DIN EN ISO 306, 50 K/h, load 50 N, procedure B	3,32
Glass transition temperature	°C	DIN EN ISO 15106-3 at 23 °C, 85% to 0% relative humidity	1,1 and 107,2
Melting temperature (Peak)	°C	DIN EN ISO 11357-2 at 20 K/min	2)
Crystallization temperature	°C	DIN EN ISO 11357-3 at 20 K/min	2)
Shore D hardness	-	DIN EN ISO 11357-3 at 20 K/min	80
Lineer coeffficient of thermal	10-5 1/K	DIN 53505	9,7
expansion (23-80 °C)		ISO 11359-2, procedure B, 5 K/min in direction of production	

Fire Classification

Standard	Rating	Thickness	ess Colour		
DIN EN ISO 11925-2	B-S2, d0	1 mm	Transparent		
DIN EN 13823					

PET Sheet Transparent & White

Thickness		Sheet Size		Colour	Sur	face	:	Sheet / Palle	t		Sheet / Pack	(
mm	1000*1400	1250*2050	1400*3000		Matt	Gloss	1000*1400	1250*2050	1400*3000	1000*1400	1250*2050	1400*3000
0,30	~	~	n/a		~	~	2000	1000	n/a	100	50	n/a
0,40	~	~	~		~	~	1400	700	400	100	50	20
0,50	~	~	~	Transparent	~	~	1000	600	350	50	50	n/a
0,60	•	~	~	and	~	~	900	500	300	50	30	20
0,70	~	~	~	White	~	~	750	450	250	50	30	20
0,75	•	~	~		~	~	750	450	250	50	30	20
1,00	~	~	~		~	~	540	300	180	50	30	20
1,20	•	~	n/a		~	~	450	250	n/a	50	25	n/a
1,40	~	~	n/a		~	~	400	210	n/a	40	30	n/a
1,50	•	~	n/a		~	•	350	200	n/a	30	20	n/a





PS Sheets

PS Line is available to produce one, two, three or five layers PS, ABS, ABS+PMMA, PETG and PP sheets from 1 mm to 6mm thicknesses as different colors and with different additives. It is a Battenfeld machine. Although this line has a movable guillotine to cut the sheets according to customer's desire but, for the precise sheeting an INPRO sheeter is available for final cutting. This line has been also fed by Colortronic driers and dosing equipments.

Features:

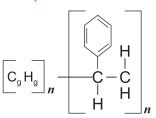
HIPS

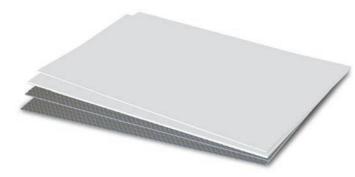
- Good dimensional strength
- Good impact strength
- Good heat resistance
- Suitable for thermoforming
- Machinable
- Good dimensional stability
- •Good Izod Impact strength
- •Smooth surface
- Excellent insulatorthalate.

	Minimum	Maximum
Thickness	1,00 mm	6,00 mm
Width	600 mm	2050 mm
Lenght	500 mm	3500 mm

For special sizes and tolerances of up to 0.5 mm, sheets can be ordered.

Composition:





Operating Processes











Lamination









Adhesive Binding











Physical and Chemical properties:

Test	Dimension	Standard	Value
Density	g/cm3	DIN EN ISO 1183	
Modulus of elasticity (tensile)	Мра	DIN EN ISO 527-3, 1B/50, 1 mm/min till 5 Mpa, in direction of production	
Tensile stress at yield	Мра	DIN EN ISO 527-3, 1B/50, 1 mm/min till 5 Mpa, in direction of production	
Elongation at yield	%	DIN EN ISO 527-3, 1B/50, 1 mm/min till 5 Mpa, in direction of production	
Breaking strength (20 °C)	MPa	DIN EN ISO 527-3, 1B/50 in direction of production	
Elongation at break	%	DIN EN ISO 527-3, 1B/50 in direction of production	
Modulus of elasticity (flexion)	MPa	DIN EN ISO 178, 2 mm/min till 1,5%, then 10 mm/min	
Flexural strength at 3.5 % flexion	MPa	DIN EN ISO 178, 2 mm/min till 1,5%, then 10 mm/min	
Flexural strength , maximum	MPa	DIN EN ISO 178, 2 mm/min till 1,5%, then 10 mm/min	
Impact strength at +23 °C	KJ/m2	KJ/m2 DIN EN ISO 179-1/1eU, in direction of production, support distanc	
		62 mm, 4 Joule Hammer	
Impact strength notched at +23 °C	KJ/m2	DIN EN ISO 179-1/1eU, in direction of production, support distance	
Vicat softening point	KJ/m2	62 mm, 0,54 Joule Hammer and 1 Joule hammer (ABS)	
Water vapor permeability	g/(m2d)	DIN EN ISO 306, 50 K/h, load 50 N, procedure B	
Glass transition temperature	°C	DIN EN ISO 15106-3 at 23 °C, 85% to 0% relative humidity	
Melting temperature (Peak)	°C	DIN EN ISO 11357-2 at 20 K/min	
Crystallization temperature	°C	DIN EN ISO 11357-3 at 20 K/min	
Shore D hardness	-	DIN EN ISO 11357-3 at 20 K/min	
Lineer coeffficient of thermal	10-5 1/K	DIN 53505	
expansion (23-80 °C)		ISO 11359-2, procedure B, 5 K/min in direction of production	

PS Sheet

Thickness	Sheet Size			Colour
mm	1000*1400	1250*2050	2050*3050	
1,00	~	~	~	
1,50	~	~	~	White
2,00	~	~	~	Matt/glass
3,00	•	•	~	
4,00	•	•	~	
5,00	~	~	~	

Application AreasSigns

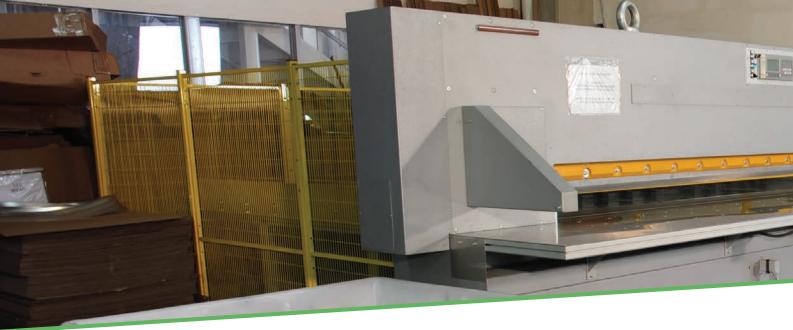
White Goods Equipments (Refrigerator Interiors)
Sanitary Sector (Shower Doors)
Packaging
Electrical components
Toy components
Eurpiture Sector Furniture Sector Interior dividing panels











Sizing & Recycling



Rapid production lines combine with sizing capabilities offer a customer-size oriented approach. Our top priority is quality. Our certified quality management system serve for this level on international standarts. On our plant we integrate technology and nature, we work with energy concepts, production waste management and recycling.



















- Ensure adequate ventilation or exhaust ventilation in the working area.
- Avoid inhalation of dust.
- Should be stored indoor to be protected from heat and direct sunlight.
- •Store in dry, dark & well ventilated area, with NO EXPOSURE to sunlight, wind, dirt or hard objects to prevent damage.
- •Store on a flat clean raised surface, and placed on a soft material (cardboard) to prevent damage.
- Outdoors, sheets should be covered with an opaque material (cardboard, wood, EPDM sheet etc.) that provides protection from the sun.
- Outdoors, DO NOT store sheets under flexible PVC coverings.
- Outdoors, storage of sheets exposed to sun light will cause the protective polyethylene film to bake onto the sheet, and it WILL NOT BE ABLE TO BE REMOVED.

Recycling

Plastic sheets can be recycled.
This product is not regarded as hazardous waste.
Dispose in accordance with local regulations.

Cut & Drill

Standard circular, jig, or table saw with a blade. Drilling is achievable with standard wood drill bits. Trimming with standard box cutting knife.

Care of material

The surface may be cleaned using a clean soft sponge and washing with lukewarm water containing a mildsoap or a slightly acidic, neutral or slightly alkaline detergent. Then rinse thoroughly with clean water and dry with chamois leather or a moist sponge.

Do not use abrasive or highly alkaline cleaners, acetone, benzene, leaded gasoline or carbon tetrachloride on the plastic surfaces. Never scrape with razor-blades or other sharp instruments.

Rinse sheet with water. Use warm soapy (mild liquid dish soap) water to clean sheets.

If any dirt remains, gently wipe off with a soft cloth. Apply final rinse and dry with soft cloth, if possible, to prevent water spotting.

Do not use sponges, squeegees, brushes or sharp instruments as they may damage the UV protective coating.

Environment

On our plant we integrate technology and nature; we work with energy concepts, production, waste management and recycling.

Nature provides us with a never-ending source of materials, colors, shapes, and light and air. We are comitted not only to providing the best of nature's qualities, but also to preserving nature and the environment. Use of our products helps to reduce global warming, the products are produced from non-toxic and non-polluting materials and all products are completely recyclable.

MTplastech sheets inherently "green" in its form, are also produced in our environment-friendly factories, meeting the international environmental management standards. Running systematic controls in its production, all features of our production create little or no negative impact on nature.

In spite of alternative sources most of the world's electricity is still produced by burning fuels such as coal and oil, these resources are not replaceable and will eventually be exhausted. MTplastech's advanced technology production use significantly reduced energys and help save these precious resources.

MTPlastech undertakes to function in all its pursuits in order to remove or minimize the safety and environmental hazards for its employees, contractors, customers and the general public.





The information and recommendations in this brochure are accurate and reliable to the best of our knowledge, however users should perform their own tests to determine the suitability of these products for their own particular purposes.



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