



marittimo
pneumatic tube

Teknolojide Mükemmellik, Detayda Güven...

Perfection in Technology, Trust in Detail...

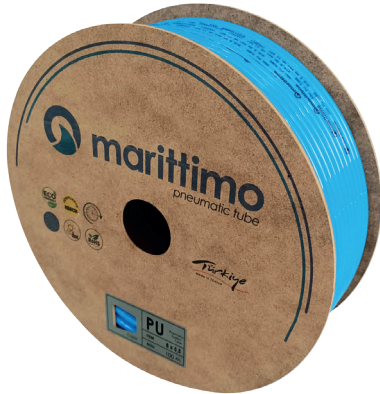
Teknik Özellikler / Technical Data

<i>Poliüretan / Polyurethane</i>	2
<i>Polyamid / Polyamide</i>	3
<i>Polietilen / Polyethylene</i>	4
<i>Teflon / Teflon</i>	5
<i>Spiralli PU / PU Coiled Tube</i>	6
<i>Algılama / Detection Tube</i>	7
<i>İnfüzyon / Infusion</i>	8
<i>Poliüretan (Ether) / Polyurethane (Ether)</i>	9
<i>Kimyasal Maddelere Dayanıklılık Tablosu Table of Chemical Substances Resistance</i>	10
<i>Sertifikalar / Certificates</i>	11-13
<i>Paketleme / Packaging Chart</i>	14

KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Basıncı Operating Pressure (bar)	Burkulma Bending (R)	Ağırlık Weight (g/m)
M PU ES 0402	2	4	1	16	16	14,2
M PU ES 0425	2,5	4	0,75	12	18	10,1
M PU ES 0503	3	5	1	12	20	16,3
M PU ES 0604	4	6	1	12	21	20,4
M PU ES 0805	5	8	1,5	16	27	39,2
M PU ES 0855	5,5	8	1,25	11	33	32,6
M PU ES 0806	6	8	1	8	39	28,8
M PU ES 1065	6,5	10	1,75	12	34	56,7
M PU ES 1007	7	10	1,5	9	36	49,1
M PU ES 1075	7,5	10	1,25	6	41	64,3
M PU ES 1208	8	12	2	9	44	73,4
M PU ES 1209	9	12	1,5	7	51	59,8
M PU ES 1495	9,5	14	2,25	12	60	94,4
M PU ES 1410	10	14	2	9	65	86,3
M PU ES 1511	11	15	2	9	76	97,6
M PU ES 1611	11	16	2,5	11	112	126,1
M PU ES 1612	12	16	2	9	105	108,6

BASINÇ DEĞİŞİMİ / PRESSURE VARIATION

Sıcaklık / Temperature	20°C	30°C	40°C	50°C	60°C
Basınç Değeri / Pressure Rating	100%	80%	69%	62%	51%



Poliüretan Hammade
98AE-5 Shore A
Polyurethane Raw Material
98AE-5 Shore A



Darbelere Dayanıklı
Shockproof



Esnek ve Uzun Ömürlü
Flexible and Long Lasting



Düşük Basıncılı Hatlarda
Low Pressure Lines

Hava ile Hareketlenen ve
Otomatik Bağlantı
Gerektiren Sistemlerde
Systems Moving with Air and
Requiring Automatic Connection



Yağlama Sistemlerinde
Lubrication Systems



Temiz Hava Aktarımında
Clean Air Transfer



KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Basıncı Operating Pressure (bar)	Burkulma Bending (R)	Ağırlık Weight (g/mt)
M PA 0425	2,5	4	0,75	18	41	8,7
M PA 0503	3	5	1	23	57	14
M PA 0604	4	6	1	22	63	17
M PA 0855	5,5	8	1,25	24	96	31
M PA 0806	6	8	1	21	85	22
M PA 1007	7	10	1,5	20	176	41
M PA 1008	8	10	1	18	155	29
M PA 1209	9	12	1,5	22	160	48
M PA 1410	10	14	2	22	320	74
M PA 1512	12	15	1,5	18	310	62
M PA 1612	12	16	2	21	340	86
M PA 1613	13	16	1,5	15	375	73

BASINÇ DEĞİŞİMİ / PRESSURE VARIATION

Sıcaklık / Temperature	20°C	30°C	40°C	50°C	60°C	70°C
Basınç Değeri / Pressure Rating	100%	80%	69%	62%	51%	49%

NORM BİLGİLERİ / SPECIFICATIONS

PA hortumlarımız, güvenilirlik ve performans için belirlenmiş **DIN 73378, DIN 74324** standartlarına uygun üretilmektedir.
PA Tubes are produced in compliance with the DIN 73378 and DIN 74324 standards, which are specified for reliability and performance.



Polyamid Hammede
PA12.6
Polyamide Raw Material
PA12.6

Hava ile Hareketlenen ve
Otomatik Bağlantı
Gerektiren Sistemlerde
Systems Moving with Air and
Requiring Automatic Connection



Sert ve Parlak Dış Yüzey
Hard and Glossy Exterior

Gres ve Hidrolik
Yağlama Sistemlerinde
Grease and Hydraulic Oil Lines



Dış Ortam
Uygulamalarına Uygun
Compatible with Outdoor Use

Yakıt ve CNG/LPG
Gaz Aktarma Hatlarında
Fuel and Gas Lines



Düşük Basıncılı Hatlarda
Low Pressure Lines

Boya ve Su Bazlı
Kimyasal Hatlarında
Paint and Water-Based
Chemical Lines



Su Hatlarında
Clean Water Lines

KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Basıncı Operating Pressure (bar)	Burkulma Bending (R)	Ağırlık Weight (g/m)
M PE 0402	2	4	1	16	25	9
M PE 0604	4	6	1	12	38	16
M PE 0805	5	8	1,5	11	54	32
M PE 0806	6	8	1	9	47	21
M PE 1008	8	10	1	6	86	28
M PE 1006	6	10	2	12	77	47
M PE 1065	6,5	10	1,75	11	73	42
M PE 1007	7	10	1,5	9	81	36
M PE 1210	10	12	1	6	136	34
M PE 1209	9	12	1,5	9	110	48
M PE 1208	8	12	2	12	105	56
M PE 1410	10	14	2	8	170	64
M PE 1612	12	16	2	6	210	72

BASINÇ DEĞİŞİMİ / PRESSURE VARIATION

Sıcaklık / Temperature	20°C	30°C	40°C	50°C	60°C	70°C
Basınç Değeri / Pressure Rating	100%	81%	71%	58%	51%	47%



Polietilen Hammadde
IPETHENE LD
Polyethylene Raw Material
IPETHENE LD



Dış Ortam
Uygulamalarına Uygun
Compatible with Outdoor Use



Düşük Basıncılı Hatlarda
Low Pressure Lines



Temiz Hava Aktarımında
Clean Air Transfer

Hava ile Hareketlenen ve
Otomatik Bağlantı
Gerektiren Sistemlerde
Systems Moving with Air and
Requiring Automatic Connection



Boya Hatlarında
Paint Lines



Su Bazlı Kimyasal Hatlarında
Water-Based Chemical Lines



KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Basıncı Operating Pressure (bar)	Burkulma Bending (R)	Ağırlık Weight (g/mt)
M PTFE 0402	2	4	1	26	22	21
M PTFE 0604	4	6	1	19	35	35
M PTFE 0806	6	8	1	16	45	51
M PTFE 1008	8	10	1	12	60	65
M PTFE 1210	10	12	1	10	90	78



Teflon Hammaddede PTFE
Teflon Raw Material PTFE



Sıcak Su ve Buhar Hatlarında
Hot Water and Steam Lines



Gıda Uyumlu
Food Compliant



Hava ile Hareketlenen ve
Otomatik Bağlantı
Gerekli Sistemlerde
Systems Moving with Air and
Requiring Automatic Connection

Su Bazlı Kimyasal Hatlarında
Water Based Chemical Lines

Temiz Hava Aktarımında
Clean Air Transfer

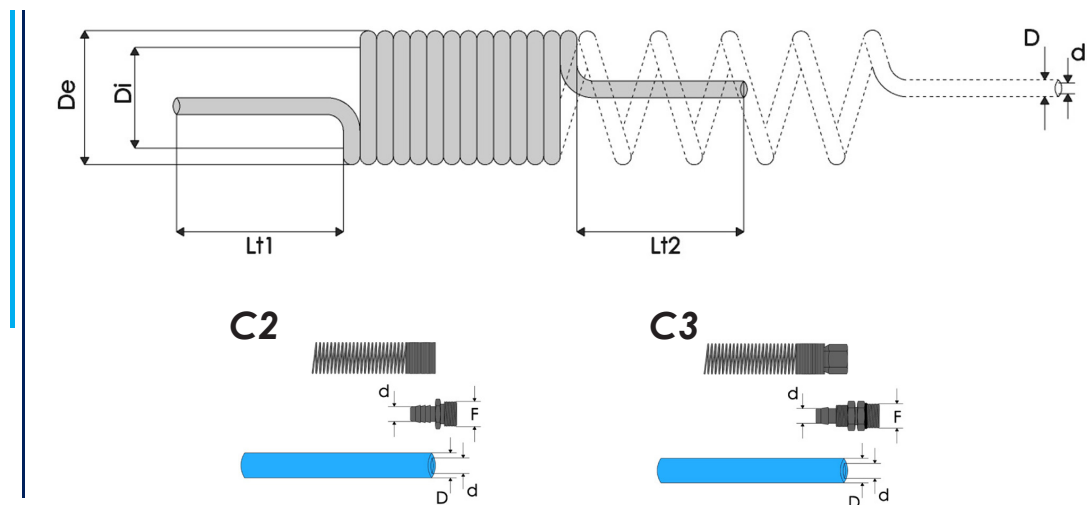
Gres ve Hidrolik
Yağlama Hatlarında
Grease and Hydraulic
Lubrication Lines

Yakıt ve Gaz Aktarma Hatlarında
Fuel and Gas Transfer Lines

Boya Hatlarında
Paint Lines






KOD M PU C	D (mm)	d (mm)	De (mm)	Di (mm)	Lt1 (mm)	Lt2 (mm)	Ex L (mt)	Work L (mt)	C2 Rakor Union	C3 Rakor Union
4 x 2,5	4	2,5	43	35	100 - 400	100 - 400	2,5	1,25		
4 x 2,5	4	2,5	43	35	100 - 400	100 - 400	3	1,5		
4 x 2,5	4	2,5	43	35	100 - 400	100 - 400	5	2,5		
6 x 4	6	4	47	35	100 - 400	100 - 400	2,5	1,25	1/4	1/8
6 x 4	6	4	47	35	100 - 400	100 - 400	3	1,5	1/4	1/8
6 x 4	6	4	47	35	100 - 400	100 - 400	5	2,5	1/4	1/8
8 x 5	8	5	51	35	100 - 400	100 - 400	2,5	1,25	1/4	1/4
8 x 5	8	5	51	35	100 - 400	100 - 400	3	1,5	1/4	1/4
8 x 5	8	5	51	35	100 - 400	100 - 400	5	2,5	1/4	1/4
8 x 5	8	5	51	35	100 - 400	100 - 400	7,5	3,75	1/4	1/4
8 x 5	8	5	51	35	100 - 400	100 - 400	10	5	1/4	1/4
8 x 5	8	5	51	35	100 - 400	100 - 400	15	7,5	1/4	1/4
8 x 5,5	8	5,5	51	35	100 - 400	100 - 400	2,5	1,25	1/4	1/4
8 x 5,5	8	5,5	51	35	100 - 400	100 - 400	3	1,5	1/4	1/4
8 x 5,5	8	5,5	51	35	100 - 400	100 - 400	5	2,5	1/4	1/4
8 x 5,5	8	5,5	51	35	100 - 400	100 - 400	7,5	3,75	1/4	1/4
8 x 5,5	8	5,5	51	35	100 - 400	100 - 400	10	5	1/4	1/4
8 x 5,5	8	5,5	51	35	100 - 400	100 - 400	15	7,5	1/4	1/4
10 x 6,5	10	6,5	80	60	100 - 400	100 - 400	5	2,5	1/4	1/4
10 x 6,5	10	6,5	80	60	100 - 400	100 - 400	7,5	3,75	1/4	1/4
10 x 6,5	10	6,5	80	60	100 - 400	100 - 400	10	5	1/4	1/4
10 x 6,5	10	6,5	80	60	100 - 400	100 - 400	15	7,5	1/4	1/4
12 x 8	12	8	84	60	100 - 400	100 - 400	5	2,5	1/4	3/8
12 x 8	12	8	84	60	100 - 400	100 - 400	7,5	3,75	1/4	3/8
12 x 8	12	8	84	60	100 - 400	100 - 400	10	5	1/4	3/8
12 x 8	12	8	84	60	100 - 400	100 - 400	15	7,5	1/4	3/8



KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Basıncı Operating Pressure (bar)	Burkulma Bending (R)	Ağırlık Weight (g/mt)
M PDT 0604	4	6	1	23	65	15
M PDT 0806	6	8	1	21	89	21

PERFORMANS BİLGİLERİ / PERFORMANCE DATA

Renk Seçeneği / Colour Options	Yanıt Süresi / Response Time		
Kırmızı / Red		+75 °C	4 sn / 4 sec 750 °C - 12 bar
Mavi / Blue		+110 °C	5 sn / 5 sec 750 °C - 12 bar
Siyah / Black		+110 °C	8 sn / 8 sec 450 °C - 12 bar



Algılama için Özel Formüle Edilmiş
Hammadde
Specially Formulated
Raw Material for Detection

Yangın Güvenliği Sistemlerinde
Fire Suppression Systems



Algılama Cihazlarından Gelen
Sinyallerin İletiminde
Transmission of Signals from
Detection Devices

Su ve Kimyasal Hatlarında
Water and Chemical Lines



Yangın Algılama Sistemlerinde
Hızlı Tepki Süresi
Fast Response Time in
Fire Detection Systems

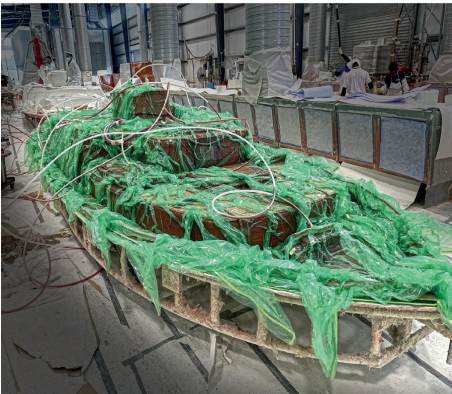
Kolay Montaj ve Dönme/Büküme
Hareketlerine Uygun
Easy Installations and Suitable for
Rotational/Bending Movement



KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Vakumu Operating Vacuum (bar)	Burkulma Bending (R)	Ağırlık Weight (g/m ²)
M PIN 1008	8	10	1	-1	90	26
M PIN 1209	9	12	1,5	-1	108	47,4
M PIN 1210	10	12	1	-1	138	33
M PIN 1612	12	16	2	-1	208	70,5
M PIN 1613	13	16	1,5	-1	222	65

VAKUM DEĞİŞİMİ / VACUUM VARIATION

Sıcaklık / Temperature	20°C	30°C	40°C	50°C	60°C	70°C
Vakum Değeri / Vacuum Rating	100%	80%	70%	60%	50%	45%



İnfüzyon için Özel Formüle Edilmiş
Hammadde
Specially Formulated
Raw Material for Infusion



Kompozit Gövde, Güverte ve Diğer
Deniz Araçları Bileşenlerinde
Composite Hull, Deck, and Other
Marine Vessel Components Dection



Rüzgar Türbinleri Kanat Üretiminde
Wind Turbine Blade Production



Su Oyun Alanlarında
Water Play Areas



Çocuk Plastik Park Alanları
Children's Plastic Play Areas



Hafif Malzeme ve Kullanım Pratikliği
Lightweight Material and
Practicality Use

KOD Product ID (mm)	İç Çap Inner Diameter (mm)	Dış Çap Outer Diameter (mm)	Et Kalınlığı Wall Thickness (mm)	Çalışma Basıncı Operating Pressure (bar)	Burkulma Bending (R)	Ağırlık Weight (g/mt)
M PU ET 0425	2,5	4	1	16	16	14,2
M PU ET 0604	4	6	0,75	12	18	10,1
M PU ET 0805	5	8	1	12	20	16,3
M PU ET 0855	5,5	8	1	12	21	20,4
M PU ET 0806	6	8	1,5	16	27	39,2
M PU ET 1065	6,5	10	1,25	11	33	32,6
M PU ET 1007	7	10	1	8	39	28,8
M PU ET 1208	8	12	1,75	12	34	56,7
M PU ET 1209	9	12	1,5	9	36	49,1



Poliüretan Hammadde
ETHER 98 Shore A
Polyurethane Raw Material
ETHER98 Shore A



1198 UV Dayanımlı
Shockproof



Işıktaki Stabilize Edilmiş
52 Shore D Sertliği
Stabilized in Light and of
Hardness 52 Shore D



Otomatik Bağlantı
Gerekli Sistemlerde
Systems Moving with Air and
Requiring Automatic Connection

Ağırlıklı Gözlem Gerektiren
Sıvı Sistemlerinde, Vakum,
Robotik, Hidroliz Direnci,
Kablo Taşıyıcı Zincir Sistemlerinde
Fluid lines requiring observation,
Vacuum, Robotics, Hydrolysis Resistance
Cable Carrier System



Düşük Basıncılı Hatlarda
Low Pressure Lines



Temiz Hava Aktarımında
Clean Air Transfer



* Özel siparişlerde...
* Special orders only...

Table of Chemical Substances Resistance

Kimyasal Maddelere Dayanıklılık Tablosu



Chemical Substance Kıyasal Madde	PA12	PAGE	PTFE	LDPE	PU ester	PU ether	Chemical Substance Kıyasal Madde	PA12	PAGE	PTFE	LDPE	PU ester	PU ether	Chemical Substance Kıyasal Madde	PA12	PAGE	PTFE	LDPE	PU ester	PU ether	Chemical Substance Kıyasal Madde	PA12	PAGE	PTFE	LDPE	PU ester	PU ether	
Acetaldehyde	40/L	O	20/L	-	-	-	Castor Oil	R	-	R	-	-	-	Hydrochloric Acid	-	O	R	nr	L	-	Potassium Hydroxide	nr	O	nr	-	-	-	
Acetic Acid	nr	O	20/L	-	-	-	Chloric Acid	nr	-	R	-	-	-	Hydrochloric Acid	nr	O	R	nr	-	-	Potassium Hydroxide	40/L	O	R	-	-	-	-
Acetic Acid	40/L	O	R	nr	L	-	Chlorine	20/L	O	-	-	-	-	Hydrocyanic Acid	-	O	R	-	-	-	Potassium Hypochlorite	-	-	20/L	-	-	-	-
Acetic Acid	20/L	O	R	-	-	-	Chlorine Dioxide	20/L	O	-	-	-	-	Hydrofluoric Acid	nr	O	L	-	-	-	Potassium Iodide	60	O	R	-	-	-	-
Acetic Anhydride	20/L	O	20/L	-	-	-	Chlorine Gas	nr	O	nr	-	-	-	Hydrogen gas	R	O	-	-	-	-	Potassium Nitrate	40/L	-	R	-	-	-	-
Acetone	60/L	O	20/L	-	-	-	Chlorine Liquid	nr	O	nr	-	-	-	Hydrogen Peroxide	40/L	O	L	L	L	-	Potassium Permanganate	nr	O	L	-	-	-	-
Acetone	60/L	O	20/L	-	-	-	Chlorine Water	L	O	L	-	-	-	Hydrogen Peroxide	nr	O	20/L	-	-	-	Potassium Persulfate	-	-	R	-	-	-	-
Acetophenone	-	O	20/L	-	-	-	Chloroacetic Acid	nr	O	R	-	-	-	Hydrogen Sulfide	60/L	O	R	-	-	-	Potassium Sulfate	R	O	R	-	-	-	-
Acetylene	R	O	-	-	-	-	Chlorobenzene	nr	O	nr	-	-	-	Hydroquinone	-	O	R	-	-	-	Propene liquid	R	O	-	-	-	-	-
Acrylonitrile	-	O	L	-	-	-	Chloroform	40/L	O	nr	-	-	-	Hypochlorous Acid	-	-	20/L	-	-	-	Propyl Acetate	-	O	-	-	-	-	-
Adipic Acid	R	O	R	-	-	-	Chlorosulphonic Acid	nr	O	nr	-	-	-	Iodine, gas	-	O	-	-	-	-	Propyl Alcohol	-	O	R	-	-	-	-
After Shave	-	O	nr	-	-	-	Chrome Alum	20/L	-	R	-	-	-	Isobutyl Alcohol	-	-	-	-	-	-	Propylene Dichloride	-	-	nr	-	-	-	-
Air	R	R	R	R	R	R	Chromic Acid	nr	O	20/L	-	-	-	Isocane pure	-	O	20/L	-	-	-	Propylene Glycol	40/L	-	nr	-	-	-	-
Aliphatic hydrocarbons	-	-	nr	20/L	-	-	Chromic Acid	nr	O	20/L	-	-	-	Isopropyl Alcohol	30/L	O	-	-	-	-	Propylene Oxide	-	O	-	-	-	-	-
Allyl Alcohol	-	-	O	20/L	-	-	Cider	20	O	R	-	-	-	Isopropyl Ether	-	O	20/L	-	-	-	Pyridine	20/L	O	L	-	-	-	-
Allyl Chloride	-	-	20/L	-	-	-	Citric Acid	L	O	R	nr	L	-	Jet Fuel (JP4, JP5)	-	-	-	-	-	-	Salicylic Acid saturated	20	O	R	-	-	-	-
Alum	R	-	R	-	-	-	Citric Acid	60/L	O	R	-	-	-	Kerosene	60/L	O	nr	-	-	-	Sea Water	R	O	R	L	R	-	-
Aluminum Chloride	20	O	R	-	-	-	Coal Gas	60/L	-	L	-	-	-	Lactic Acid	R	O	R	nr	L	-	Sewage Water	-	-	O	-	-	-	-
Aluminum Fluoride	20	-	R	-	-	-	Coconut Oil	R	O	L	-	-	-	Lactic Acid	80/L	O	R	-	-	-	Silicon Oil	R	O	R	-	-	-	-
Aluminum Hydroxide	20	O	R	-	-	-	Copper Chloride	nr	-	R	-	-	-	Lanolin	60	-	R	-	-	-	Silicon Tetrachloride	-	-	R	-	-	-	-
Aluminum Sulfate	R	O	R	-	-	-	Copper Cyanide	nr	-	R	-	-	-	Lauric Acid	-	O	-	nr	L	-	Silver Cyanide	-	O	R	-	-	-	-
Aminobenzoic acid	L	-	R	-	-	-	Copper Fluoride	20/L	-	R	-	-	-	Lead Acetate	-	O	R	-	-	-	Silver Nitrate	-	-	O	-	-	-	-
Ammonia, dry gas	R	O	R	-	-	-	Copper Nitrate	nr	-	R	-	-	-	Lead Acetate	R	O	-	-	-	-	Soda water	R	O	R	-	-	-	-
Ammonia, liquid	R	O	L	-	-	-	Copper Sulfate	R	O	R	-	-	-	Leomon Oil	R	O	L	-	-	-	Sodium Acetate	40/L	O	R	-	-	-	-
Ammonium Acetate	50	O	R	-	-	-	Corn Oil	R	O	R	-	-	-	Linseed Oil	R	O	-	-	-	-	Sodium Antimonate	-	-	R	-	-	-	-
Ammonium Carbonate	60	O	R	-	-	-	Cracked Seed Oil	R	O	R	-	-	-	Lithium Chloride	R	O	R	-	-	-	Sodium Benzoate	-	-	R	-	-	-	-
Ammonium Chloride	R	O	R	L	L	-	Cresol mixture	nr	O	20/L	-	-	-	Lubricating Oil	R	O	R	-	-	-	Sodium Bicarbonate	60	O	R	-	-	-	-
Ammonium Chloride	R	O	R	-	-	-	Crude Oil	80/L	-	nr	-	-	-	Lyso	-	-	-	-	-	-	Sodium Bisulfate	20	O	R	-	-	-	-
Ammonium Fluoride	-	O	R	-	-	-	Cyclohexane	80/L	O	nr	-	-	-	Magnesium Chloride	R	O	R	-	-	-	Sodium Bisulfite	20	O	R	-	-	-	-
Ammonium Hydroxide	R	O	R	-	-	-	Cyclohexanol	40/L	O	20/L	-	-	-	Magnesium Citrate	-	O	R	-	-	-	Sodium Bisulfite	-	O	R	-	-	-	-
Ammonium Nitrate	R	O	R	-	-	-	Cyclohexanone	40/L	O	nr	-	-	-	Magnesium Nitrate	-	-	R	-	-	-	Sodium Bromate	-	-	R	-	-	-	-
Ammonium Persulfate	nr	O	R	-	-	-	Decahydronaphthalene	20	-	20/L	-	-	-	Magnesium Salts	R	-	R	-	-	-	Sodium Bromide	20	O	R	-	-	-	-
Ammonium Phosphate	60	O	R	-	-	-	Detergents, synthetic	20	-	R	-	-	-	Magnesium Sulfate	-	-	R	-	-	-	Sodium Carbonate	60/L	O	R	-	-	-	-
Ammonium Sulfate	60/L	O	R	-	-	-	Dextrin	-	-	O	R	-	-	Mercuric Chloride	-	O	R	-	-	-	Sodium Chlorate	nr	O	R	-	-	-	-
Ammonium Sulfide	20	O	R	-	-	-	Diacetone Alcohol	60/L	O	-	-	-	-	Mercuric Cyanide	-	-	R	-	-	-	Sodium Chloride	R	O	R	-	-	-	-
Amyl Acetate	80/L	O	nr	-	-	-	Dibutyl Phthalate	20	O	L	-	-	-	Mercuric Nitrate	-	-	R	-	-	-	Sodium Chlorite	nr	L	20	-	-	-	-
Amyl Alcohol	60/L	O	L	-	-	-	Dibutyl Sebacate	-	-	20/L	-	-	-	Mercury	R	O	R	-	-	-	Sodium Chromate	-	-	R	-	-	-	-
Amyl Chloride	40/L	O	nr	-	-	-	Dibutylamine	-	-	nr	-	-	-	Methane	R	O	-	-	-	-	Sodium Cyanide	-	-	R	-	-	-	-
Amyl phthalate	-	-	L	-	-	-	Dichloroacetic Acid	-	-	20	-	-	-	Methanol	40/L	-	L	nr	20/L	-	Sodium Dichromate	-	O	R	-	-	-	-
Aniline	20/L	O	nr	-	-	-	Dichlorobenzene	-	O	nr	-	-	-	Methanol	40/L	-	L	nr	20/L	-	Sodium Ferricyanide	-	-	R	-	-	-	-
Aniline Hydrochloride	nr	-	20/L	-	-	-	Dichloroethylene	20	O	nr	-	-	-	Methyl Acetate	60	O	20	-	-	-	Sodium Ferrocyanide	-	-	R	-	-	-	-
Antimony pentachloride	nr	-	R	-	-	-	Diesel Fuels	60	O	L/20	-	-	-	Methyl Alcohol	20	-	L	-	-	-	Sodium Fluoride	-	-	R	-	-	-	-
Aqua Regia	nr	O	nr	-	-	-	Diethanolamine	60	O	20	-	-	-	Methyl Bromide	20	-	nr	-	-	-	Sodium Hydroxide	40/L	O	R	nr	L	-	-
Aromatic Hydrocarbons	-	-	nr	-	-	-	Diethyl Ether	20	-	nr	-	-	-	Methyl Chloride	20	-	nr	-	-	-	Sodium Hydroxide	40/L	O	R	-	-	-	-
Arsenic Acid	-	O	R	-	-	-	Diethylene glycol	60	-	R	-	-	-	Methyl Ethyl Ketone	60/L	O	20/L	-	-	-	Sodium Hydroxide	nr	O	R	-	-	-	-
Asphalt	L	-	L	-	-	-	Didylcolic Acid	-	-	R	-	-	-	Methyl Isobutyl Ketone	60/L	O	20	-	-	-	Sodium Hypochlorite	nr	O	20/L	nr	nr	-	-
Barium Bromide	-	-	R	-	-	-	Dimethyl Acetamide	-	O	-	-	-	-	Methyl Sulfate	60/L	-	-	-	-	-	Sodium Iodide	-	O	R	-	-	-	-
Barium Carbonate	20	-	R	-	-	-	Dimethyl Formamide	R/L	O	L	-	-	-	Methyl Sulphuric Acid	-	-	R	-	-	-	Sodium Nitrate	R	O	R	L	L	-	-
Barium Chloride	R	-	R	-	-	-	Dimethyl Phthalate	-	O	-	-	-	-	Methylene Chloride	nr	O	nr	-	-	-	Sodium Nitrate	R	O	R	-	-	-	-
Barium Hydroxide	20	-	R	-	-	-	Dimethyl Sulfoxide	40/L	O	20	-	-	-	Milk	R	O	R	-	-	-	Sodium Nitrite	nr	-	R	-	-	-	-
Barium Sulfate	20	-	R	-	-	-	Dimethylamine	-	O	nr	-	-	-	Mineral Oil	R	O	20/L	-	-	-	Sodium Perchlorate	-	-	R	-	-	-	-
Barium Sulfide	20	-	R	-	-	-	Dimethylamine	-	-	nr	-	-	-	Naphtha	60/L	O	20/L	-	-	-	Sodium Peroxide	-	O	20/L	-	-	-	-
Battery Acid	-	-	R	nr	L	-	Dioctyl Phthalate	80/L	-	20/L	-	-	-	Naphthalene	80/L	O	nr	-	-	-	Sodium Phosphate	20	-	R	-	-	-	-
Beer	L	O	R	-	-	-	Dioxane	R	O	-	-	-	-	Nickel Chloride	-	O	R	-	-	-	Sodium Sulfate	60/L	O	R	-	-	-	-
Beet Sugar Liquors	-	O	-	-	-	-	Dipentene	-	-	nr	-	-	-	Nickel Nitrate	-	-	R	-	-	-	Sodium Sulfide	60/L	-	R	-	-	L	L
Benzaldehyde	40/L	O	20/L	-	-	-	Disodium Phosphate	-	-	R	-	-	-	Nickel Sulfate	-	O	R	-	-	-	Sodium Sulfide	60/L	-	R	-	-	-	-
Benzene	60/L	O	nr	-	-	-	Disodium Sulfate	-	-	R	-	-	-	Nicotine	-	-	R	-	-	-	Sodium Thiosulfate	20	O	R	-	-	-	-
Benzenesulfonic Acid	-	O	R	-	-	-	Epichlorohydrin	-	-	R	-	-	-	Nicotinic Acid	-	-	L	-	-	-	Soybean Oil	R	-	L	-	-	-	-
Benzoic Acid	20/L	-	R	-	-	-	Ethanol	40/L	-	L	nr	L	-	Nitric Acid	nr	O	R	nr</										

SQR CERTIFICATION



Sertifika CERTIFICATE

DO HORTUM SANAYİ İNŞAAT MAK.
TAR. TİC. LTD. ŞTİ.

AOSB 1 KISIM MAH. ATATÜRK BULVARI NO: 9 DÖŞEMEALTI/
ANTALYA/TÜRKİYE

ISO 9001:2015

Kapsam/Scope

TPU, PA, PE, PVC HORTUMLARIN TASARIMI, ÜRETİMİ VE SATIŞI

DESIGN, PRODUCTION AND SALE OF TPU, PA, PE, PVC HOSES

Bu sertifika ile yukarıda adı geçen kuruluşun Kalite Yönetim Sistemi gerekliliklerini karşıladığı tasdik olunur.
This is to certify that the above mentioned Company meets the requirement of Quality Management System.

Bölge NO / Certification Number : MTS-26544
İlk Kayıt Tarihi / Date of Initial Reg. : 16.09.2022
Bazım Tarihi / Date of Certificate : 16.09.2022
Geçerlilik Tarihi / Date of Expiry : 15.09.2023

Bu sertifika herhangi bir belgelendirme performansı yerine asla bir ölçüt değildir. Bu belge düzenlenmesinden önceki süreçler hakkında üç yıllık sertifikasyon periyodu bir tarafa kalar geçerlidir.
This certificate is valid until the end of the three-year certification period if the organization complies with the certification requirements and the surveillance audits to be carried out at least once a year are completed successfully.

Büyükdüğü

Operasyon Müdürü / Operation Manager



sigma cert

Bahçeçe Mahallesi Saray Bulvarı
Sarıyer Business Plaza Apt. No:18/25
Etiler/Şişli/Beşiktaş
Tel: +90 312 385 08 89
bilgi@sigma-cert.com.tr

SQR CERTIFICATION



Sertifika CERTIFICATE

DO HORTUM SANAYİ İNŞAAT MAK.
TAR. TİC. LTD. ŞTİ.

AOSB 1 KISIM MAH. ATATÜRK BULVARI NO: 9 DÖŞEMEALTI/
ANTALYA/TÜRKİYE

ISO 14001:2015

Kapsam/Scope

TPU, PA, PE, PVC HORTUMLARIN TASARIMI, ÜRETİMİ VE SATIŞI

DESIGN, PRODUCTION AND SALE OF TPU, PA, PE, PVC HOSES

Bu sertifika ile yukarıda adı geçen kuruluşun Çevre Yönetim Sistemi gerekliliklerini karşıladığı tasdik olunur.
This is to certify that the above mentioned Company meets the requirement of Environmental Management System

Bölge NO / Certification Number : MTS-26545
İlk Kayıt Tarihi / Date of Initial Reg. : 16.09.2022
Bazım Tarihi / Date of Certificate : 16.09.2022
Geçerlilik Tarihi / Date of Expiry : 15.09.2023

Bu sertifika herhangi bir belgelendirme performansı yerine asla bir ölçüt değildir. Bu belge düzenlenmesinden önceki süreçler hakkında üç yıllık sertifikasyon periyodu bir tarafa kalar geçerlidir.
This certificate is valid until the end of the three-year certification period if the organization complies with the certification requirements and the surveillance audits to be carried out at least once a year are completed successfully.

Büyükdüğü

Operasyon Müdürü / Operation Manager



sigma cert

Bahçeçe Mahallesi Saray Bulvarı
Sarıyer Business Plaza Apt. No:18/25
Etiler/Şişli/Beşiktaş
Tel: +90 312 385 08 89
bilgi@sigma-cert.com.tr



To whom it may concern

Please be advised that in none of the manufacturing processes of above-mentioned brands/grades have been intentionally added the following substances:

- Substances listed in **Annex II of Directive 2011/65/EC** (RoHS II) and following amendments until present date:
 - Lead (0,1 %)
 - Mercury (0,1 %)
 - Cadmium (0,01 %)
 - Hexavalent chromium (0,1 %)
 - Polybrominated biphenyls (PBB) (0,1 %)
 - Polybrominated diphenyl ethers (PBDE) (0,1 %)
 - Bis(2-ethylhexyl) phthalate (DEHP) (0,1 %)
 - Butyl benzyl phthalate (BBP) (0,1 %)
 - Diallyl phthalate (DAP) (0,1 %)
 - Diisobutyl phthalate (DIBP) (0,1 %)

Their presence is also not expected to be above thresholds in our raw materials, according to information coming from our suppliers. However, substances concentrations, both in finished products and in raw materials, are not routinely checked by chemical analysis, therefore we cannot give full warranties about their complete absence as impurities/contaminants, especially in grades using recycled raw materials.

This declaration does not relieve the converter from carrying out its own investigations and tests, neither does it imply any guarantee for certain properties nor the suitability of the product for the specific purposes included in above mentioned Regulation or in any other standard/norm.

This information applies to the material as it leaves its production facilities and does not cover any additive, pigment, etc... subsequently included or introduced by the converter.

Ravago Petrokimya Üretim A.Ş.
R&D Department

Important notice:

The properties stated above, cannot guarantee specific properties for specific applications. The user himself, has the responsibility to check the properties of our products, for his application with specific tests and test methods. The user is responsible for usage, storage and handling of our products, following the general safety and environmental prescriptions for such products. Appropriate processing conditions for the articles must be applied. The information is provided in good faith and based upon the information and statements we received from our relevant up-stream suppliers. They correspond to the state-of-the-art and refer to the state of the laws at the date of issue. **This declaration is valid until product(s) or regulatory changes occur.** No legal rights can be derived from it and Ravago Group disclaims any liability for any errors or omissions.

Ravago Group Headquarters
Munsterstr 85A Tel: +32 (0)14 87 25 11 www.ravago.com
B - 2370 Aendrick Fax: +32 (0)14 87 25 12 manufacturing@ravago.com

Declaration



To whom it may concern

Please be advised that in none of the manufacturing processes of above-mentioned brands/grades have been intentionally added the following substances:

- Substances of **Very High Concern**, as listed by ECHA in the Candidate List for Authorisation (updated on 15/06/2022). The list is available for consultation on ECHA website, at the following link: <https://echa.europa.eu/fr/candidate-list-table>;
- Substances included in **Annex XIV of REACH** ("Authorisation List"). The list is available for consultation on ECHA website, at the following link: <https://echa.europa.eu/fr/authorisation-list>;

Their presence is also not expected to be >0.1% in our raw materials, according to information coming from our suppliers. However, substances concentrations, both in finished products and in raw materials, are not routinely checked by chemical analysis, therefore we cannot give full warranties about their complete absence as impurities/contaminants, especially in grades using recycled raw materials.

Please note that Ravago Petrokimya Üretim A.Ş. is not supplying articles. Therefore, notifications of SVHC presence to the **SCIP database** does not apply to our products. Nevertheless, the introduction of SCIP will improve information about SVHC at recycling stages and we are in contact with our suppliers of recovered materials in order to obtain updated information regarding possible SCIP notifications made during previous materials' lifecycles.

This declaration does not relieve the converter from carrying out its own investigations and tests, neither does it imply any guarantee for certain properties nor the suitability of the product for the specific purposes included in above mentioned Regulation or in any other standard/norm.

This information applies to the material as it leaves its production facilities and does not cover any additive, pigment, etc... subsequently included or introduced by the converter.

Ravago Petrokimya Üretim A.Ş.
R&D Department

Important notice:

The properties stated above, cannot guarantee specific properties for specific applications. The user himself, has the responsibility to check the properties of our products, for his application with specific tests and test methods. The user is responsible for usage, storage and handling of our products, following the general safety and environmental prescriptions for such products. Appropriate processing conditions for the articles must be applied. The information is provided in good faith and based upon the information and statements we received from our relevant up-stream suppliers. They correspond to the state-of-the-art and refer to the state of the laws at the date of issue. **This declaration is valid until product(s) or regulatory changes occur.** No legal rights can be derived from it and Ravago Group disclaims any liability for any errors or omissions.

Ravago Group Headquarters
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Declaration

Tisan

TİSAN ENGINEERING PLASTICS LTD. CO.
EKŞİOĞLU MİH. YAVUZ SELİM CD. 86. SK. NO:4 ALEMDAĞ
ÇEKMEKÖY İSTANBUL
Tel: 0 216 429 36 65 Fax: 0 216 312 14 78
E-mail: tisan@tisan.com.tr web:www.tisan.com.tr

Dear Valued Customer;

On 1 JUNE 2007, REACH directive No. 1907/2006 created by the European Union regarding chemical materials was entered into force.

As Tisan, our obligations related to the REACH regulation and its applications have been evaluated and related studies were conducted by our management. As explained in REACH Directive, the mixtures that we produce are evaluated as compounds. Registration is not a requirement for compounds. However, the producers of compounds are obliged to track the registration process of the additives and monomers which they use in their compounds.

In this process, our firm follows the registration process of the products indirectly. Due to REACH Standard, we are in contact with our suppliers in respect of all materials that we use for the production of our products.

We check and interrogate whether or not the registration of the chemicals that we acquired are conducted accurately through the announcements of European Chemicals Agency (ECHA) and we request the documents if registration is done.

As the documents include commercial information, our firm is not legally obliged to disclose the registration number obtained from the suppliers or CAS and EC numbers.

ECHA announced SVCH Candidate List on 28 October 2008 for the first time. The list is included in Annex XVII of REACH Regulation. The updated list can be reached from the link at below.

We hereby confirm, that the products and materials that we acquire for our firm do not comprise any elements that are included in the below link, and that any materials that are not in compliance with REACH Regulation, 2015/863/EU RoHS 3 Directive are not used in our products.

<https://echa.europa.eu/candidate-list-table>

M01000034 TISLAMID 6 UNR IM BK

Respectfully yours;
Business Development Department
tisan@tisan.com.tr

Important Notice: All information included in this declaration rely on the statements and documents obtained from the suppliers. Tisan does not account for or engage itself for the accuracy of those information and can not be held responsible for their use or for damage and loss claims of third parties. The person and corporations which are directly informed shall act in the light of their own judgement and technical data about the appropriateness and the conditions of the use of the products and in all related matters. It is those user persons' and corporations' responsibility to judge and assess the appropriateness of these materials (including safety) before any use. Any loss resulting from the use can not be reverted to Tisan.

Capilene® Polypropylene Iphethene® Low Density Polyethylene

Turkish REACH- KKDIK

We hereby confirm that the monomers and additives used to manufacture Capilene® and Iphethene® grades that require pre-registration have been successfully pre-registered in accordance with the Turkish REACH- KKDIK by Carmel Olefins Turkish only representative (OR) or by our upstream suppliers.

The full registration period began on January 1st, 2021 and will last until December 31st, 2023.

Disclaimer

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however, we do not assume any liability whatsoever for the accuracy and completeness of the above information. Carmel Olefins Ltd. makes no warranties which extend beyond the description contained herein. Any information given in this statement does not constitute any warranty of merchantability or fitness for a particular use. It is the customers' responsibility to inspect and to test our products in order to satisfy themselves as to the suitability of the products to their particular purpose. The customers are responsible for the appropriate, safe and legal use, processing and handling of our products. Carmel Olefins Ltd. will not accept any liability with respect to the use of its products in conjunction with other materials. The information contained herein relates to our materials when not used in conjunction with any third party materials.



CARMEL OLEFINS LTD.

Tel: 972-4-8466813 Fax: 972-4-8466958


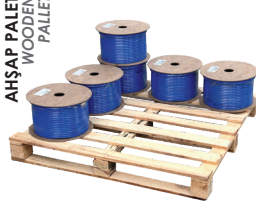




Email: techserv@ceol.co.il Web: <http://www.carmel-olefins.co.il>

Carmel Olefins Ltd. POB 1468 Haifa 31014 Israel

Date issued: 10/10/2021

Paketleme

Packaging Chart

Paketleme Tipi Packaging Type	PU							PA							PE							PTFE					
	Hortum Ölçüsü Diameter (Ø)							Hortum Ölçüsü Diameter (Ø)							Hortum Ölçüsü Diameter (Ø)							Hortum Ölçüsü Diameter (Ø)					
	4	6	8	10	12	14	16	4	6	8	10	12	14	16	4	6	8	10	12	14	16	4	6	8	10	12	
KARTON KUTU CARDBOARD BOX  36 x 36 x 63 cm / 30 desi	6	6	6	3	3			6	6	6	3				6	6	6	3				10	10				
AHŞAP PALET WOODEN PALLET  110 x 110 x 160 cm / Max 500 kg	144	144	144	72	72	50	50	144	144	144	72	72	50	50	144	144	144	72	72	50	50	120	120	60	60	60	
STREÇ SARGILI PAKET STRETCH WRAPPED PACKAGE  35 x 35 x 60 cm / 30 desi						2	2	6	6	6	5	3	2	2	6	6	6	5	3	2	2				5	5	5
5 M'LİK POŞET NYLON BAG 5 METERS  Miktarlar 1 koli içindir / Quantities for 1 box	160	120																									
25 M'LİK VAKUMLU PAKET VACUUM NYLON PACKAGE 25 METERS  Miktarlar 1 koli içindir / Quantities for 1 box	32	24	18	10	8			32	24	18	10	8			32	24	18	10	8								
50 M'LİK VAKUMLU PAKET VACUUM NYLON PACKAGE 50 METERS  Miktarlar 1 koli içindir / Quantities for 1 box	16	14	12	8	6			16	14	12	8	6			16	14	12	8	6								

COIL

Hortum Ölçüsü Diameter (Ø)	Uzunluk / Length			
	5 m	7,5 m	10 m	15 m
6	130 adet / piece	50 adet / piece		
8	80 adet / piece	50 adet / piece	45 adet / piece	30 adet / piece
10	50 adet / piece	20 adet / piece	20 adet / piece	15 adet / piece
12	40 adet / piece	20 adet / piece	20 adet / piece	15 adet / piece



KARTON KUTU CARDBOARD BOX  Miktarlar 1 koli içindir / Quantities for 1 box
