

ASSORTMENT OVERVIEW

Our Products for the Railway Industry

Application	Product	Benefit	Backing	Adhesive type	Total thickness [µm]	Adhesion to steel [N/cm]	Temp. resistance [°C]	Elongation at break [%]	Tensile strength [N/cm]
Masking	tesa® 4104	<ul style="list-style-type: none"> High adhesion Variety of colors available 	PVC film	Natural rubber	65	2.3	NA	60	60
	tesa® 4154	<ul style="list-style-type: none"> Good transparency to match the marks for straight lines Sharp color edges 	PVC film	Natural rubber	65	3	70	67	60
	tesa® 4334	<ul style="list-style-type: none"> Extremely precise and flat paint edges Sticks very flush to the surface and prevents paint tears 	Flat paper	Acrylic	90	1.9	120/30 min	4	30
Curved fine-line masking	tesa® 4174	<ul style="list-style-type: none"> Very flexible Good conformability to multidimensional surfaces No shrinkage at high temperatures Removable without leaving any residue 	PVC film	Natural rubber	110	3.4	150	200	25
	tesa® 4319	<ul style="list-style-type: none"> Very flexible Adapts perfectly to any curvature Rapid and reliable masking off 	Highly-creped paper	Natural rubber	375	4.5	60	58	28
Masking for sealing processes	tesa® 4104	<ul style="list-style-type: none"> For masking railcar bodies (straight lines) High adhesion 	PVC film	Natural rubber	65	2.3	NA	60	60
	tesa® 4174	<ul style="list-style-type: none"> Very flexible For masking railcar bodies (window curves) 	PVC film	Natural rubber	110	3.4	150	200	25
	tesa® 4154	<ul style="list-style-type: none"> For masking windows Sharp edges 	PVC film	Natural rubber	65	3	70	67	60
Large-area masking	tesa® 4378	<ul style="list-style-type: none"> For efficient masking of large areas Convenient 3-in-1 solution: masking tape 4309 (flexible) – additional paper edge (perfect paint absorption) – HDPE film (protection against spray particles) 	Slightly-creped paper	Natural rubber	170	3.5	120	12	47
General masking	tesa® 4318	<ul style="list-style-type: none"> For high requirements like water- or solvent-based paints followed by oven drying 	Slightly-creped paper	Natural rubber	170	4	160	12	47
	tesa® 4309	<ul style="list-style-type: none"> For spray painting with oven drying up to 120°C High adhesion and tear resistance Reliable hold even on masking sheets 	Slightly-creped paper	Natural rubber	170	3.5	120	12	47
	tesa® 4651	<ul style="list-style-type: none"> High-quality acrylic-coated cloth tape Very strong adhesion, even to rough surfaces High abrasion resistance Easy to tear by hand, straight tear edge Easy to write on 	Acrylic-coated cloth	Natural rubber	310	3.3	130/30 min	13	100
	tesa® 4657	<ul style="list-style-type: none"> Residue-free removal, even after exposure to high temperatures Highly ageing resistant High resistance to paint solvents Excellent tape for die-cuts 	Acrylic-coated cloth	Thermo-setting natural rubber	290	4.6	180/30 min	7.5	105

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Mounting									
Permanent mounting	tesa® 4952	<ul style="list-style-type: none"> • High immediate bonding strength • UV, water, and ageing resistant • Compensation of irregular surfaces, tension, and gaps • Very good cold-shock absorption 	PE foam	Tackified acrylic	1150	6.5	NA	200	10
	tesa® 4965	<ul style="list-style-type: none"> • Immediate usability right after assembly • Reliable bond even to LSE substrates • Very good humidity resistance • Suitable for the most demanding applications such as heavy stress, high temperature or, critical substrates 	PET film	Tackified acrylic	205	11.5	200 (short term)	50	20
	tesa® ACX ^{plus} 707x	<ul style="list-style-type: none"> • Black acrylic foam tape • For demanding outdoor applications • Recommended for bonding panels and reinforcement bars • Very good temperature resistance with outstanding cold-shock resistance 	Foamed acrylic	Pure acrylic	500/ 1000/ 1500/ 2000	20/ 30/ 35/ 40	220 (short term)	1000	NA
Pre-mounting of small parts	tesa® 4964	<ul style="list-style-type: none"> • Thick, tacky natural-rubber adhesive coating • Tear-resistant flexible fabric backing • High immediate adhesion • Well suited for rough surfaces • Residue-free removal in most cases • Tearable by hand 	Cloth	Natural rubber	390	7.5	110 (short term)	10	80
	tesa® 51960	<ul style="list-style-type: none"> • Very high tack on many commonly used surfaces • Resistant to ageing and plasticizers 	PP film reinforced by fabric	Tackified acrylic	248	4.7/ 9.0	120 (short term)/60 (long term)	80	30
Mirror mounting	tesa® 4952	<ul style="list-style-type: none"> • High immediate bonding strength • UV, water, and ageing resistant • Compensation of irregular surfaces, tension and gaps • Very good cold-shock absorption 	PE foam	Tackified acrylic	1150	6.5	80	200	10
	tesa® 62510	<ul style="list-style-type: none"> • High ultimate adhesion level for a reliable bonding performance • UV, water, and ageing resistance 	PE foam	Tackified acrylic	1000	13.5	80	180	10

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Temporary surface protection	tesa® 51136	<ul style="list-style-type: none"> Interior protection tape for smooth and rougher surfaces Residue-free removability Very good paint anchorage Power wash and scratch resistance 	PE film	Acrylic	105	2.4	100	300	19
	tesa® 50530 PV3	<ul style="list-style-type: none"> Can be applied directly after the painting process Secure adhesion UV resistance up to 12 months Resistance to chemicals Easy to apply and remove 	Polyolefinic film	EVA	79	0.9	NA	800	30
	tesa® 50550	<ul style="list-style-type: none"> Highly transparent and nearly invisible surface protection Very good protection properties against scratching Easy, precise and fast mounting 	PP film	EVA	72	0.15	NA	650	17.5
Permanent surface protection	tesa® 54994 PV0	<ul style="list-style-type: none"> Virtually invisible when applied to painted surfaces Long-term UV resistance, resistance to chemicals, scratch resistance Very good conformability 	PU film	Pure acrylic	260	8.7	90	460	50
	tesa® 51207	<ul style="list-style-type: none"> Protection of delicate components against mechanical damage Self-lubricating tape with very good sliding properties, reduces wear and friction, and prevents noise Transparent UV and abrasion resistance 	PE	Pure acrylic	114	4.3	90	320	80
Insulation protection	tesa® 50565	<ul style="list-style-type: none"> Heat-reflecting aluminum backing Good adhesion Mechanical, moisture, oil and acid, and ageing resistance Vapor-tight High thermal conductivity 	Aluminum foil	Acrylic	90	6	160 (max) 40 (min)	8	35

Floor

Carpet fixing	tesa® 4964	<ul style="list-style-type: none"> Thick, tacky natural-rubber adhesive coating Tear resistant flexible fabric backing High immediate adhesion Well suited for rough surfaces Residue-free removal in most cases Tearable by hand 	Cloth	Natural rubber	390	7.5	110 (short term)	10	80
	tesa® 51960	<ul style="list-style-type: none"> The different adhesion value is tailor-made for carpet-laying applications Holds carpets in place securely, but can also be removed from the surface underneath without leaving any residues Very high tack on many commonly used surfaces Resistant to ageing and plasticizers (no discoloration of PVC/CV floorings) 	PP film reinforced by fabric	Tackified acrylic	248	4.7/ 9.0	120 (short term)/ 60 (long term)	80	30
Fixation of floor profiles	tesa® 4965	<ul style="list-style-type: none"> Immediate usability right after assembly Reliable bond even to LSE substrates Very good humidity resistance Suitable for the most demanding applications such as heavy stress, high temperature, or critical substrates 	PET film	Tackified acrylic	205	11.5	200 (short term)	50	20
	tesa® ACX ^{plus} 707x	<ul style="list-style-type: none"> Black acrylic foam tape For demanding outdoor applications Recommended for bonding panels and reinforcement bars Very good temperature resistance with outstanding cold-shock resistance 	Foamed acrylic	Pure acrylic	500/ 1000/ 1500/ 2000	20/ 30/ 35/ 40	220 (short term)	1000	NA

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Anti-slip									
Floor anti-slip	tesa® 60950	<ul style="list-style-type: none"> • Very good adhesion – suitable for demanding floors • Strong and durable adhesive coating • Tearable by hand • No shrinkage after application 	PVC film	Acrylic	810	5.8	-5 to +50	25	NA
	tesa® 60951	<ul style="list-style-type: none"> • Very good adhesion – suitable for demanding floors • Strong and durable adhesive coating • Tearable by hand • No shrinkage after application 	PVC film	Acrylic	810	10	-5 to +50	25	NA
Roofing anti-slip	tesa® 60950	<ul style="list-style-type: none"> • Very good adhesion – suitable for demanding floors • Strong and durable adhesive coating • Tearable by hand • No shrinkage after application 	PVC film	Acrylic	810	5.8	-5 to +50	25	NA
	tesa® 60951	<ul style="list-style-type: none"> • Very good adhesion – suitable for demanding floors • Strong and durable adhesive coating • Tearable by hand • No shrinkage after application 	PVC film	Acrylic	810	10	-5 to +50	25	NA

Further applications

General permanent protection	tesa® 4662	<ul style="list-style-type: none"> • Excellent adhesion even on rough and dusty surfaces • Water repellent • Conformable 	PE laminated cloth	Natural rubber	230	4.4	95	18	30
	tesa® 4688	<ul style="list-style-type: none"> • Strong adhesion • Waterproof • Easy to unwind 	PE extruded cloth	Natural rubber	260	3.4	110/30 min	9	52
	tesa® 4657	<ul style="list-style-type: none"> • Residue-free removal, even after exposure to high temperatures • Highly ageing resistant • High resistance to paint solvents • Excellent tape for die-cuts 	Acrylic-coated cloth	Thermo-setting natural rubber	290	4.6	180/30 min	7.5	105
Sandblasting	tesa® 4434	<ul style="list-style-type: none"> • Very strong and resistant paper backing • For masking applications during sandblasting • Very good durability (50 sec/4 bar) 	Flat paper	Natural rubber	670	2.7	60	6	180
	tesa® 4432	<ul style="list-style-type: none"> • Strong and resistant paper backing • For masking applications during sandblasting • Good durability (6 sec/4 bar) 	Flat paper	Natural rubber	330	8	100	6	93
	tesa® 4657	<ul style="list-style-type: none"> • Residue-free removal, even after exposure to high temperatures • Highly ageing resistant • High resistance to paint solvents • Excellent tape for die-cuts 	Acrylic-coated cloth	Thermo-setting natural rubber	290	4.6	180/30 min	7.5	105
Powder coating	tesa® 4331	<ul style="list-style-type: none"> • Backing is a special laminate of polyester film with a non-woven backing • Combines conformability and high strength • Easily removable without residue 	PET/fabric	Silicone	110	4	200	100	53
	tesa® 50600	<ul style="list-style-type: none"> • High tear resistance and adhesion • Easy to remove without residue • Also available with liner 	PET	Silicone	80	4	220/30 min	110	75
	tesa® 50650	<ul style="list-style-type: none"> • Good conformability • Provides sharp paint edges 	PET	Silicone	55	3	220/30 min	120	50

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Cable fixation/ cable bundling	tesa® 50118 PV1	<ul style="list-style-type: none"> • Suitable for irregular, rough, and critical interior surfaces • Excellent damping properties • Good peel resistance 	PET fleece	Acrylic	540	NA	160 (short term)	70	35
	tesa® 4173 PV2	<ul style="list-style-type: none"> • Temperature resistance • Flexible • Tearable by hand 	PVC film	Acrylic	126	1.8	105	250	30
Vibration and noise damping	tesa® 60606 PV1	<ul style="list-style-type: none"> • High initial tack and adhesion • Good ageing and abrasion resistance • Excellent repulsion resistance • High conformability even on LSE surfaces 	PET fleece	Tackified acrylic	850	3.6 (to PE)	NA	85	55
	tesa® 60608 PV1	<ul style="list-style-type: none"> • High initial tack and adhesion • Good ageing and abrasion resistance • Excellent repulsion resistance • High conformability even on LSE surfaces 	PET fleece	Tackified acrylic	250	3.3 (to PE)	NA	17	37
Wire harnessing	tesa® 51036 PV9	<ul style="list-style-type: none"> • High temperature resistance • High abrasion resistance 	PET cloth	Acrylic	220	5	150 (max)/ 40 (min)	40	275
Identification labels/ laser labels	tesa® 6940	<ul style="list-style-type: none"> • Very resistant to heat, abrasion, and chemicals • High contrast and excellent marking precision • Not removable without destruction of label • High-speed marking 	Acrylic	Acrylic	95/140	>1.8	270 (max)/ 40 (min)	NA	NA
	tesa® 6930	<ul style="list-style-type: none"> • Very resistant to heat, abrasion, and chemicals • High contrast and excellent marking precision • Not removable without destruction of label 	Acrylic	Acrylic	95/140	>1.8	270 (max)/ 40 (min)	NA	NA
Floor marking	tesa® 4169	<ul style="list-style-type: none"> • Excellent for permanent and heavy-duty marking • Thick, strong vinyl backing • Good adhesion on various surfaces • Resistant to high mechanical stress • UV resistant • Available in several colors 	Soft PVC	Acrylic	180	1.8	90/ 30 min	200	30
	tesa® 60760	<ul style="list-style-type: none"> • Good adhesion on many different surfaces • Tearable by hand • Perfect suitability for temporary marking and low-duty hazard warning 	Soft PVC	Natural rubber	150	2	90/ 30 min	220	33

tesa® products prove their impressive quality day in, day out in demanding conditions and are regularly subjected to strict controls. All technical information and data mentioned above are provided to the best of our knowledge on the basis of our practical experience. They shall be considered as average values and are not appropriate for a specification. Therefore, tesa SE can make no warranties, express or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose. The user is responsible for determining whether the tesa® product is fit for a particular purpose and suitable for the user's method of application. If you are in any doubt, our technical support staff will be glad to support you.