



# METAL- MANUFACTURING METALWORKING

**Adhesive-Tape Solutions for Reliable  
and Efficient Processes**





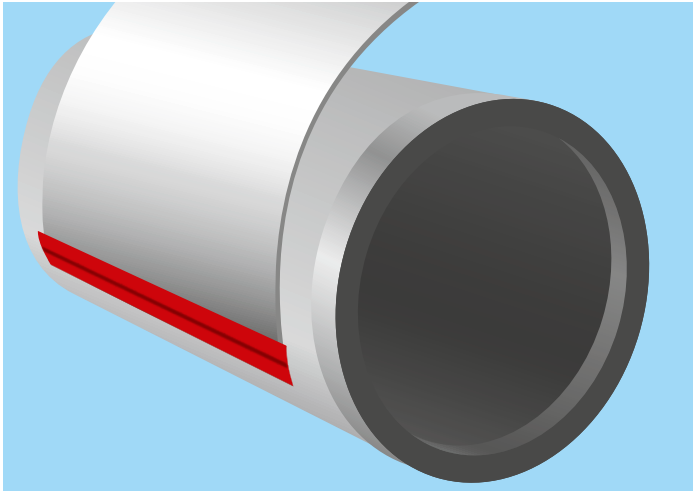
# ADVANCED ADHESIVE-TAPE SOLUTIONS

Metal products are at the heart of the modern world, from railways and cars to washing machines. The production process from making basic steel into more advanced products – from long- to round-coiled products and from standard to specialty grades – is complex and diverse. This is why we offer advanced adhesive-tape solutions designed to optimize production and to reduce waste along the value chain right up to the finished product.

Our advanced adhesive-tape solutions for the metal-manufacturing and metalworking industry cover almost all steps of the metal-manufacturing process – from core starting all the way to the finished product – which is typically the prematerial for metalworking companies.

Main applications that can be optimized by using advanced adhesive-tape solutions

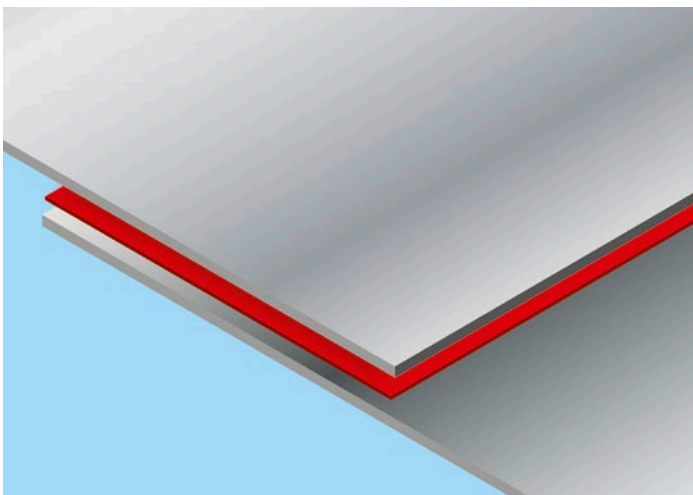
Typical applications	Metal manufacturing	Metalworking/fabrication
Core starting	✓	
Splicing	✓	✓
End tabbing	✓	✓
Edge and surface protection	✓	✓
Bundling and marking	✓	✓



## Core starting

After casting, rolling results in the first aluminum or steel product that is typically a coil. Moving from thick coils to thinner ones involves several core-starting operations.

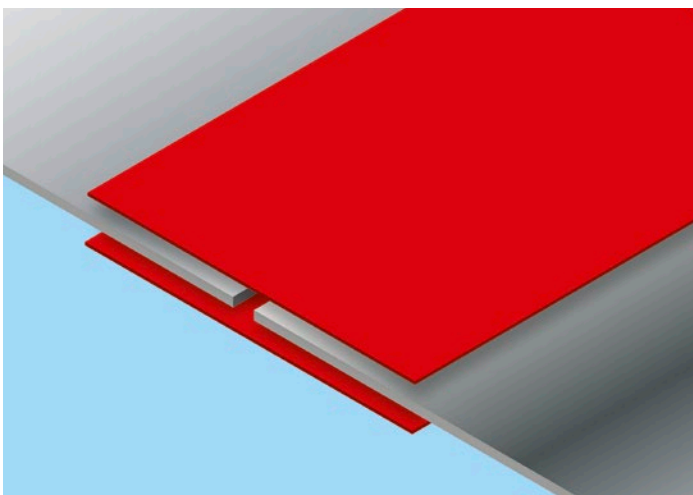
Depending on the thickness and the retention forces of individual steel grades, single- or double-sided tapes can be used to securely attach the first layer of product to the core.



## Overlap splicing

Metal coils are spliced to run the metal continuously through finishing and treatment lines. The two most common splicing techniques used are “overlap splicing” and “butt splicing.” For overlap splicing we provide double-sided self-adhesive-tape solutions with proven adhesive systems to enable high shear-stress resistance at high temperatures, as well as a tensile-resistant backing to compensate for web stress.

An additional benefit for added work safety is the combination of double-sided splicing tapes with edge protection tapes.

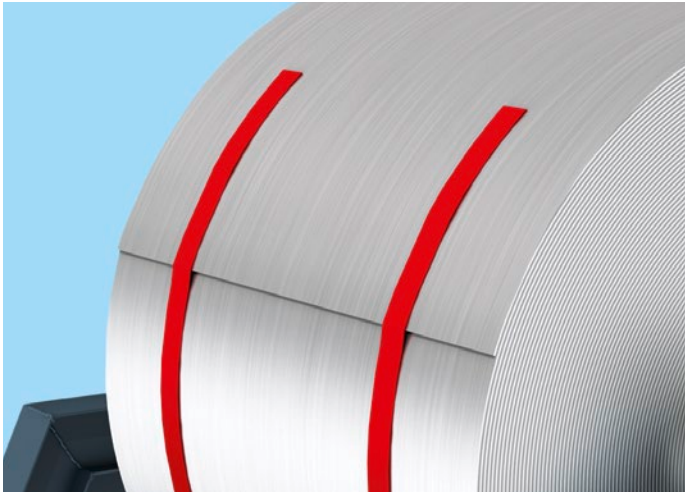


## Butt splicing

An attractive alternative to splicing without overlaps is known as “butt splicing.” Here, very strong single-sided self-adhesive tapes with custom-made adhesive systems are used. A clear advantage is the reduction of material waste, commonly associated with overlap splices.

For aluminum processors this type of splicing also offers the opportunity to economically use short-length coils by preparing sequences of coils.

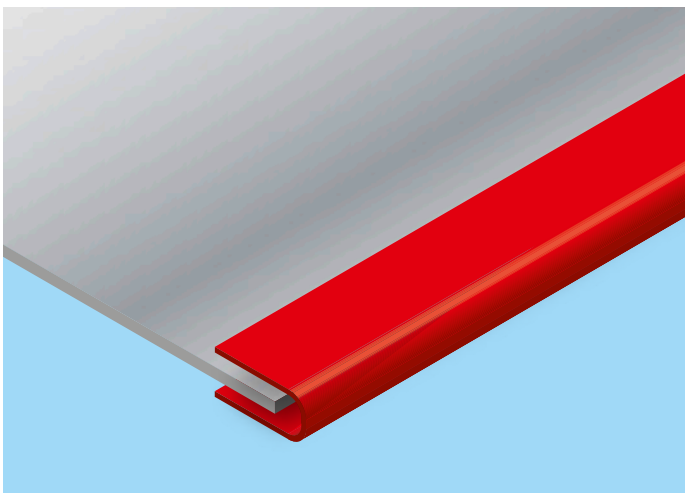




## End tabbing

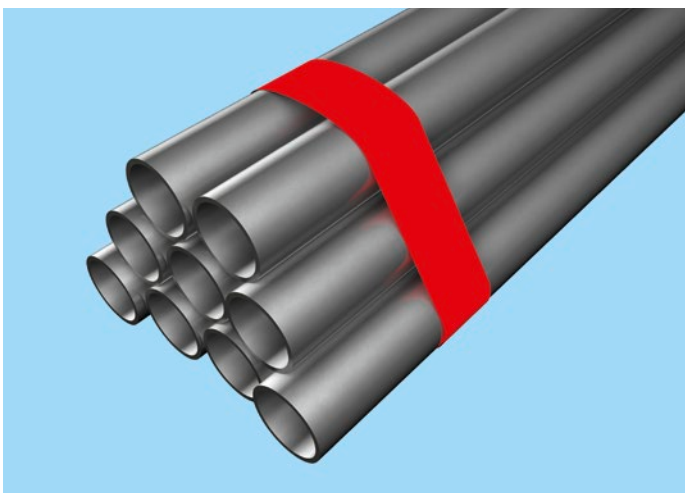
Metal coils are end-tabbed for transportation inside and outside of the metal plant. Fastening of coils with end-tabbing tapes avoids lift-up during transport, offering a secure bond to various metal and steel surfaces. In addition to low elongation and very high tensile strength, these specialty tapes are also designed to prevent tearing and have shear-resistant adhesives.

The clear benefit: a high level of safety for the personnel handling the coils, when reinforced with suitable packaging material.



## Edge and surface protection

Further down the metal-working value chain, companies with different specializations process aluminum and steel products. During these production processes, edge and surface protection is also needed to safeguard workers from personal injuries and to protect semifinished and finished products from damage such as scratches, dust, or dirt during internal and external transport.



## Bundling and marking

At the end of the forming and finishing process, products are typically marked and bundled ready for logistics and transport. With safe and reliable reinforcement, you are able to reduce the risk of damage to your products, while also protecting personnel from injuries caused by bundled units coming loose during transportation or picking and packing operations in warehouses. In addition, marking products (e.g., color-coding different grades of metal pipes to easily differentiate them while stored in warehouses) allows for easy and accurate order-picking operations.

# ASSORTMENT OVERVIEW

## Our Products for the Metal-Manufacturing and Metalworking Industry

Product	Description	Benefits	Core starting	Overlap splicing	Butt splicing	End tabbing	Edge/surface protection	Bundling/marketing
<b>Single-sided tapes</b>								
tesa® 4122/4124	Heavy-duty packaging tapes with very strong PVC backings and natural rubber adhesives	<ul style="list-style-type: none"> <li>• Strong adhesion</li> <li>• Resistance to shock impacts</li> </ul>				✓		✓
tesa® 4289/64284	Tensilised polypropylene strapping tapes with natural rubber adhesive systems	<ul style="list-style-type: none"> <li>• High tensile strength</li> <li>• Low elongation</li> <li>• Heat and cold resistance</li> </ul>				✓		✓
tesa® 4328/4330	Crepe paper masking tapes with natural rubber adhesives	<ul style="list-style-type: none"> <li>• Suitable for painted metal</li> <li>• Residue-free removal without tearing</li> <li>• Tearable by hand</li> </ul>					✓	✓
tesa® 4319	Strong crepe paper masking tape with natural rubber adhesive	<ul style="list-style-type: none"> <li>• Strong adhesion</li> <li>• Very high elongation</li> <li>• Strong abrasion resistance</li> </ul>					✓	✓
tesa® 4651/4661	Acrylic-coated cloth tapes on woven rayon fabric backing with a natural rubber adhesive	<ul style="list-style-type: none"> <li>• High adhesion even on rough surfaces</li> <li>• Conformable with abrasion resistance</li> <li>• Easy to write on</li> <li>• Available in multiple colors</li> </ul>					✓	✓
tesa® 4657	Acrylic-coated cloth tape on a woven cotton fabric and a thermosetting natural rubber adhesive	<ul style="list-style-type: none"> <li>• High adhesion even on rough surfaces</li> <li>• Residue-free removal</li> <li>• Resistance to high temperatures, solvents, and aging</li> </ul>			✓			
tesa® 4990	Single-sided adhesive tape with a modified-acrylic adhesive and a PET/cloth backing	<ul style="list-style-type: none"> <li>• Suitable for high temperatures</li> <li>• High tear resistance</li> <li>• No additional curing time needed</li> </ul>			✓			
tesa® 53315/53393/53398	Polyester-backed, fiberglass-reinforced monofilament tapes	<ul style="list-style-type: none"> <li>• Shear-resistant adhesives with high tack</li> <li>• Very good aging properties</li> <li>• Residue-free removal from many substrates</li> </ul>				✓		✓
tesa® 53388	Polypropylene-backed, polyester-reinforced monofilament tapes	<ul style="list-style-type: none"> <li>• High adhesion even on rough surfaces</li> <li>• Conformable with good abrasion resistance</li> <li>• Available in multiple colors</li> </ul>						✓
<b>Double-sided tapes</b>								
tesa® 4962	Non-woven backing coated with tackified acrylic adhesive	<ul style="list-style-type: none"> <li>• High adhesion</li> <li>• Excellent grabbing power on rough surfaces</li> <li>• Excellent temperature resistance</li> </ul>		✓				
tesa® 4964	Flexible fabric backing coated with a natural rubber adhesive system	<ul style="list-style-type: none"> <li>• Suitable for applications on irregular surfaces</li> <li>• Residue-free removal in most cases</li> </ul>	✓	✓				
tesa® 4965	Strong PET backing coated with a tackified acrylic adhesive	<ul style="list-style-type: none"> <li>• Suitable for demanding applications with heavy stress</li> <li>• Suitable for high temperatures or critical substrates</li> </ul>	✓	✓				
tesa® 4968/4970	Strong PVC backing coated with a tackified acrylic adhesive	<ul style="list-style-type: none"> <li>• Good bonding performance on rough or dusty surfaces</li> <li>• Suitable for long-term applications</li> </ul>	✓	✓				
tesa® 51970	Polypropylene backing coated with a tackified acrylic adhesive	<ul style="list-style-type: none"> <li>• Secure bond even on rough surfaces</li> <li>• Good temperature resistance</li> <li>• Suitable for outdoor use</li> </ul>	✓					
<b>Heat-activated films</b>								
tesa® 8401/8402/8405/8410	tesa HAF® is a reactive heat-activated film based on phenolic resin and nitrile rubber; it is activated by heat and pressure	<ul style="list-style-type: none"> <li>• Extremely high bonding strength</li> <li>• High temperature resistance</li> <li>• Excellent chemical resistance</li> <li>• Easy to die-cut</li> </ul>		✓	✓			

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 above mentioned 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.



Our management system is certified according to the standards ISO 9001, IATF 16949, and ISO 14001.