

WACKER

CREATING TOMORROW'S SOLUTIONS

SILICONES FOR ELECTRO-TECHNICAL RAILWAY APPLICATIONS

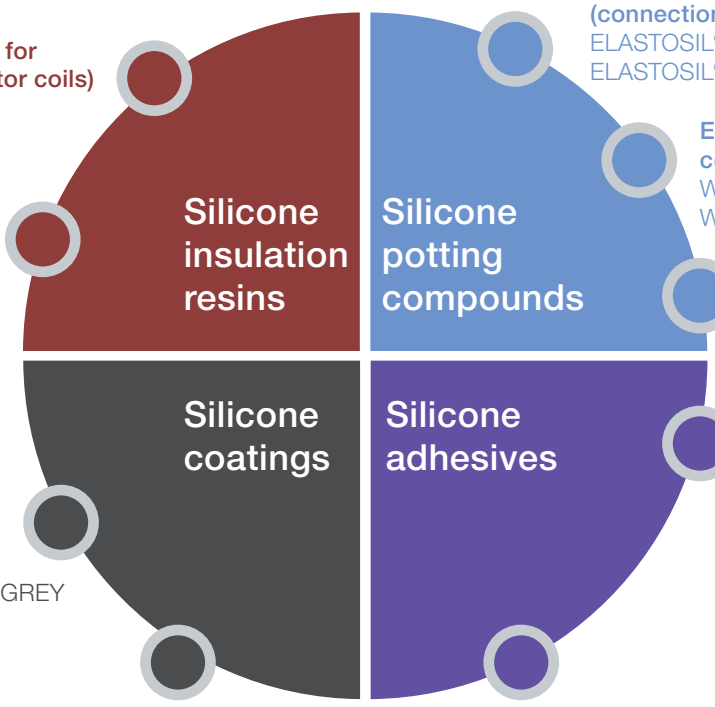
PRODUCT OVERVIEW RAILWAY

Silicones are crucial for ensuring the reliability of railway systems during everyday operations.

Due to their unique combination of resistance, robustness and durability, WACKER silicones protect the railway infrastructure from environmental impacts.

They reliably protect the electrical equipment of railway vehicles and help maintain the functionality of railway components under harsh outdoor conditions.

Silicone resins	Silicone rubber grades	Silicone gels	Silicone rubber dispersions
Key features			
• Supplied as a liquid or powder or as flakes • Heat-curing • Electrically insulating • Excellent heat resistance • Flame retardant	• One-part or two-part • Curing at room temperature and under heat • Water repellent • Electrically insulating • Self-extinguishing • Designed for continuous use at 180 °C or higher	• Two-part • Very low viscosity • Curing at room temperature • Very soft • Intrinsically tacky • Electrically insulating	• One-part • Solvent-based • Very low viscosity • Ideal for spraying • Curing at room temperature by atmospheric moisture • Water repellent • Outstanding tracking resistance
Key benefits			
• Optimized electrical insulation for thermal class N and R equipment • Improved thermal management of stator coils	• Long-term protection of electrical components against environmental impacts of any kind	• Optimized protection of electronics against vibration, thermomechanical stress and environmental impacts	• Durable protective coatings for high-voltage equipment • Extended lifetime of the insulation system as a result of reducing the wear-off caused by dust particles



Impregnation resins for traction motors (stator coils)
SILRES® H62 C
SILRES® H60 A/B

Resin binders for composite laminates and mica tapes
SILRES® MK
SILRES® K
SILRES® H44
SILRES® 64558 VP
SILRES® REN 50

Coil head of traction motors
POWERSIL® 567
POWERSIL® N 553 DARK GREY

Chokes and transformer coils
ELASTOSIL® N 2076

Electrical devices (connection boxes, slot exits etc.)
ELASTOSIL® RT 607
ELASTOSIL® RT 622

Electronics and in-track components
WACKER SilGel® 612
WACKER SilGel® 616

Power modules and traction converters
SEMICOSIL® 920 LT

Electrically conductive bonding
ELASTOSIL® N 9189

Elastic bonding
- One-component moisture-curing
  ELASTOSIL® A33
  ELASTOSIL® E4
  ELASTOSIL® E14
  ELASTOSIL® E43 N
  ELASTOSIL® N2199
  ELASTOSIL® N9111
- One-component heat-curing
  SEMICOSIL® 987 GREY
  SEMICOSIL® 988/1K
- Two-component
  ELASTOSIL® RT 778

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Silicone insulation resins						
	Product type/ delivery form	Solids content [%]	Viscosity [mPa s]	Additional curing catalyst required	Tested as per DIN EN 45545-2*	Special feature
Impregnation resins for traction motors (stator coils)						
SILRES® H62 C	1-part, liquid	100	1,000	no	–	For VPI
SILRES® H60	2-part, liquid	100	1,000	no	–	For trickling
Resin binders for composite laminates and mica tapes						
SILRES® MK	Powder or flakes	100	-	yes	–	
SILRES® K	Solution in toluene	50	8	yes	–	
SILRES® H44	Powder	100	-	yes	–	
SILRES® 64558 VP	Solution in toluene	40	1,800	yes	–	For mica tapes
SILRES® REN 50	Solution in a solvent mix (xylene/n-butanol)	50	165	yes	–	For mica tapes

Silicone potting compounds						
	Product type	Mixing ratio	Viscosity [mPa s]	Curing time at 23 °C [h]	Tested as per DIN EN 45545-2*	Special feature
Electrical devices (connection box, slot exit etc.)						
ELASTOSIL® RT 607	2-part, rubber	9:1	10,000	24	●	Flame retardant
ELASTOSIL® RT 622	2-part, rubber	9:1	12,000	12	●	
Electronics and in-track components						
WACKER SilGel® 612	2-part, gel	1:1	1,000	8	–	
WACKER SilGel® 616	2-part, gel	1:1	250	4	–	Pronounced tack
Power modules and traction converters						
SEMICOSIL® 920 LT	2-part, gel	1:1	420	12	–	Low-temperature gel

Silicone adhesives						
	Product type	Consistency	Curing speed at 23 °C [mm/d]	Hardness [ShA]	Tested as per DIN EN 45545-2*	Special feature
Elastic bonding						
ELASTOSIL® N 9111 BLACK	1-part, rubber	Non-slump	1.5	40	●	
Further suitable products can be found in the overview on the front page. Alternatively, they are available on request.						
Electrically conductive bonding						
ELASTOSIL® N 9189	1-part, rubber	Non-slump	1.5	40	●	Electrically conductive

Silicone coatings						
	Product type	Solids content [%] / solvent	Curing speed at 23 °C [mm/d]	Hardness [ShA]	Tested as per DIN EN 45545-2*	Special feature
Coil head of traction motors						
POWERSIL® 567	1-part, rubber dispersion	34 / isoparaffins	1.2	45	–	Excellent tracking resistance
POWERSIL® N 553 DARK GREY	1-part, rubber dispersion	72.5 / isoparaffins	1.2	60	–	Excellent tracking resistance
Chokes and transformer coils						
ELASTOSIL® N 2076	1-part, rubber	100	1.5	36	●	Flame retardant

* Requirement Set R 22, R 23 and R 24

ELASTOSIL® POWERSIL® SEMICOSIL® SILGEL®

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