

A nighttime photograph of a city skyline, featuring the Petronas Towers, viewed from a highway with light trails from cars. A semi-transparent blue box is overlaid on the right side of the image.

E-mobility



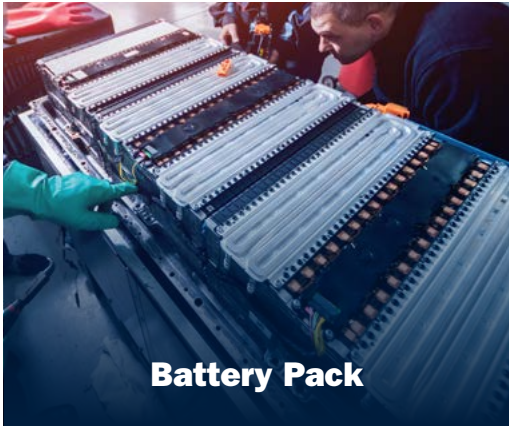
Mavom is a distributor of specialty chemicals with companies in The Netherlands, Belgium and Germany.

Years of experience, technical expertise and customer focus enable us to advise our customers about the right chemistry for their specific application. Our high-quality products ensure improvement of performance: better adhesion, smoother operation, longer life span and good protection.

We know the regulations regarding safe storage, transport and labelling of chemicals and deliver a wide assortment of premium brands directly from stock. With tailored logistics solutions we meet special customer needs.

Mavom. On top of the market, close to the customer.

Contents



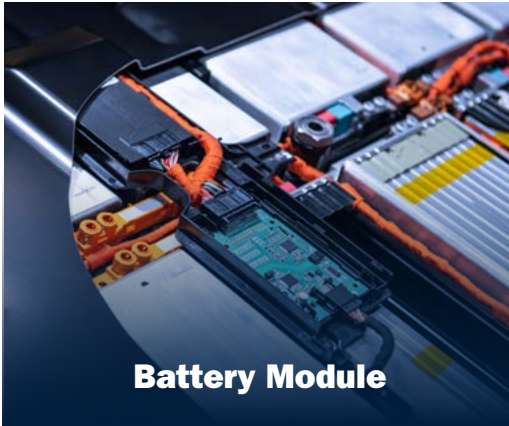
Battery Pack

THERMAL MANAGEMENT	6
BATTERY CONTROL MODULE PCB Protection	8
ASSEMBLIES Gasketing-sealing, EMI Shielding, structural adhesives	10



Power Conversion

CONVERTER/INVERTER, DC/DC CONVERTER, ONBOARD CHARGER, CHARGING MODULE	18
Thermal management, PCB protection, assemblies	



Battery Module

ASSEMBLIES Structural adhesives	12
THERMAL MANAGEMENT	14
BATTERY CELLS Assemblies, (fire)protection	16



Electric Drive System

ELECTRIC MOTOR, ELECTRIC TRANSMISSION, ELECTRIC DRIVE HOUSING	24
Assemblies	

Improving your performance

Mavom does whatever it takes to find the right chemistry for your application. We have many years of experience with various challenges in all kinds of industrial sectors. That is why we know which chemistry works best for you.

In our wide range of products we find a high-quality solution for every problem. We have no preference for a specific brand or technology. You can expect independent product advice from us.

If possible, we test whether the product actually gives the results you want. In addition, you can count on technical

support for the use, application or dosing of the product and we advise on the required equipment. In some cases, after implementation, we carry out measurements and analyses and adjust where necessary. In this way we work together with you to improve the performance of your product or process.



“
The right
chemistry for your
application



Fast deliveries

From our own central warehouse in Alphen aan de Rijn in the Netherlands, we can arrange quick delivery to our customers. We are continuously working on improving our logistic performance to serve our customers better.



Safety and chemistry

As a distributor of dangerous goods, we pay extra attention to health, safety and the environment. It goes without saying that we know and comply with the regulations about the safe storage and transport of chemicals.



Thermal management

Battery Pack



Products	Chemistry	1- or 2-part	Color	Thermal Conductivity	Cure time	Viscosity	Density	Durometer	CTE	Features & benefits
Thermally conductive Gapfillers										
Dowsil TC-4515	Silicone	2-part (1:1)	Part A: White Part B: Blue	1,5 W/m.K	2,5 hrs @ 25°C 30 min @ 80°C	240.000 mPa.s	2,7 g/cm³	50 Shore 00	160 ppm/K: -50°C to 150°C	UL94 V-0 Holds vertical position in cured and uncured state, soft and compressible once cured
Dowsil TC-4525	Silicone	2-part (1:1)	Part A: White Part B: Blue	2,5 W/m.K	2 hrs @ 25°C 20 min @ 50°C 10 min @ 80°C	217.000 mPa.s	2,9 g/cm³	55 Shore 00	95 ppm/K: -50°C to 80°C 23 ppm/K: -50°C to 150°C	UL94 V-0, Holds vertical position in cured and uncured state, soft and compressible once cured
Dowsil TC-4535 CV	Silicone	2-part (1:1)	Part A: White Part B: Blue	3,5 W/m.K	2 hrs @ 25°C	205.000 mPa.s	3,1 g/cm³	52 Shore 00	NA	UL94 V-0, Holds vertical position for a long service period, controlled silicone volatility
Electrolube GF 300	Silicone	2-part (1:1)	Part A: Blue Part B: White	3 W/m.K	12 hrs @ 25°C 80 min @ 60°C 15 min @ 100°C	140.000 mPa.s	3 g/cm³	55 Shore 00	NA	Low viscosity, low modulus prevents "pump out"
Electrolube GF 400	Silicone	2-part (1:1)	Part A: Pink Part B: White	4 W/m.K	12 hrs @ 25°C 90 minutes @ 60°C 20 minutes @ 100 °C	220.000 mPa.s	3,2 g/cm³	55 Shore 00	NA	Low modulus prevents "pump out"
Sarcon SPG-50A	Silicone	1-part	Light sky blue	5,0 W/m.K	Precured	6.900 mPa.s	3,2 g/cm³	170 mm 1/10 penetration	NA	Form in place gap filler, conformable with very low compression forces
Thermally conductive encapsulants										
Dowsil EE-3200	Silicone	2-part (1:1)	Gray	0,5 W/m.K	3 hrs @ 25°C	1.700 mPa.s	1,48 g/cm³	20 Shore 00	360 µm/m°C	Stress relieving encapsulant with fast processing properties, UL 94 V-0
Dowsil TC-6020	Silicone	2-part (1:1)	Gray	2,7 W/m.K	23 min @ 60°C, T90 13 min @ 80°C, T90 5 min @ 100°C, T90	10.640 mPa.s	2,9 g/cm³	63 Shore A	NA	Good flowability, UL 94 V-0
Dowsil TC-4605 HLV	Silicone	2-part (1:1)	Gray	1,0 W/m.K	1 hr @ 120°C	1.950 mPa.s	1,67 g/cm³	60 Shore A	NA	UL 94 V-0 @ 1,5 mm
Electrolube ER2220	Epoxy	2-part (20,8:1)	Grey	1,54 W/m.K	24 hrs @ 25°C 4 hrs @ 60°C 1 hr @ 100°C	15.000 mPa.s	2,22 g/cm³	90 Shore D	NA	Meets UL94 V-0
Electrolube ER2221	Epoxy	2-part (13,9:1)	Black	1,2 W/m.K	24 hrs @ 25°C 2 hrs @ 60°C 1 hr @ 100°C	6.000 mPa.s	1,88 g/cm³	90 Shore D	NA	Low viscosity
Araldite HW 2711-1	Epoxy	2-part (1:1)	Brown/gray	1,7 W/m.K	1 hr @ 90°C + 1,5 hrs @ 140°C	5.800 mPa.s	2,1 g/cm³	92 Shore D	24/67 ppm/K (Below Tg / Above Tg)	UL94 V-0, Thermal class H
Thermally conductive adhesives										
Dowsil SE 4486	Silicone	1-part	White	1,6 W/m.K	72 hrs @ 25°C	20.000 mPa.s	2,6 g/cm³	81 Shore A	NA	Moisture cure RTV, fast tack free
Dowsil 1-4173	Silicone	1-part	Gray	1,78 W/m.K	1,5 hr @ 100°C 30 min @ 125°C 20 min @ 150°C	62.300 mPa.s	2,7 g/cm³	92 Shore A	NA	Self priming, flowable, high tensile strength
Dowsil TC-2030	Silicone	2-part (1:1)	Gray	2,7 W/m.K	1 hr @ 130°C	220.000 mPa.s	2,9 g/cm³	92 Shore A	92 ppm/K: -50°C to 200°C	High performance thermal interface, 3,0 MPa lap shear strength on Al
Dowsil TC-2035	Silicone	2-part (1:1)	Reddish brown	3,3 W/m.K	30 min @ 125°C 10 min @ 150°C	125.000 mPa.s	3,0 g/cm³	95 Shore A	NA	High performance thermal interface, 3,3 MPa lap shear strength on Al, min BLT 50µ
Dymax 9-20801	Urethane-Acrylate	1-part	White	0,9 W/m.K	5 sec @ 200 mW/cm² (UVA 320-395 nm) + 30 min 120°C	110.000 mPa.s	2,0 g/cm³	85 Shore D	NA	Multi-Cure: UV Light cure, secondary activator and heat cure

Battery controle module

Battery Pack



PCB protection

Products	Chemistry	1- or 2-part	Color	Cure time	Viscosity	Density	Durometer	Features & benefits
Conformal coatings								
Dowsil 1-2577 Low VOC	Silicone	1-part	Transparant	24 hrs @ 25°C	1.050 mPa.s	0,9 g/cm³	25 Shore D	UL94 V-0, MIL-I-46058C, IPC-CC-830
Dowsil 3140 RTV	Silicone	1-part	Translucent	3 - 7 days @ 25°C / 50% RH. Dependant on thickness and relative humidity	34.000 mPa.s	1,05 g/cm³	32 Shore A	UL94 V-1, MIL-I-46058C, IPC-CC-830. Allows higher one-pass coating thickness
Dowsil SE 9187L	Silicone	1-part	Translucent, black, white	5 hrs @ 25°C dependant on thickness and relative humidity	1.100 mPa.s	1,0 g/cm³	17 Shore A	Controlled volatility
Dowsil 3-19XX series	Silicone	1-part	Translucent	1 hr @ 25°C dependant on thickness and relative humidity	115 - 64.000 mPa.s	0,98 - 1,03 g/cm³	33 - 36 Shore A	UL94 V-0, MIL-I-46058C, IPC-CC-830
Dowsil CC-8030	Silicone	1-part	Translucent	7 sec @ 300 mW/cm²	520 mPa.s	0,98 g/cm³	30 Shore A	Dual cure: UV and moisture
Electrolube DCA/DCB/DCR	Alkyd	1-part	Clear, black, red	2 hrs @ 25°C	200 mPa.s	0,97g/cm³	NA	Excellent chemical and solvent resistance when heat cured, UL94 V-1, UL746E, IPC-CC-830, temperature resistance from -70°C till 200°C
Electrolube AFA	Acrylic	1-part	Clear	24 hrs @ 25°C	175 mPa.s	0,91 g/cm³	NA	Aromatic free, UL94 V-0, UL746 E
Electrolube HFAC	Acrylic	1-part	Clear	24 hrs @ 25°C	360 mPa.s	0,92 g/cm³	NA	UL94 V-0, high performance coating, aromatic free
Dymax 9483	Urethane-Acrylate	1-part	Light yellow	50 sec @ 200 mW/cm² (UVA 320 - 395 nm) + 7 days @ 25°C / 50% RH	750 mPa.s	1,09 g/cm³	60 Shore D	UV/Visible light with secondary moisture cure, UL94 V-0, UL746 E

Products	Chemistry	1- or 2-part	Color	Cure time	Viscosity	Density	Durometer (penetration)	Features & benefits
Encapsulation/potting								
Sylgard 527	Silicone	2-part (1:1)	Clear, red	35 min @ 150°C 210 min @ 100°C	465 mPa.s	0,95 g/cm³	45 mm x 10 ⁻¹	Long working time for greater processing flexibility
Dowsil EG-3896	Silicone	2-part (1:1)	Slightly hazy to clear	30 min @ 70°C	520 mPa.s	0,98 g/cm³	30 mm x 10 ⁻¹	Fast heat cure toughened and self priming gel
Dowsil EG-3810	Silicone	1-part	Clear	15 min @ 125°C	690 mPa.s	0,97 g/cm³	80 mm x 10 ⁻¹	Enhanced use temperature range from -60°C to + 200°C
Dowsil Q3-6575	Silicone	2-part (1:1)	Clear	24 hrs @ 25°C 40 min @ 70°C	750 mPa.s	1,02 g/cm³	80 mm x 10 ⁻¹	Low temperature gel (-80°C)
Dowsil Q3-6679	Silicone	2-part (1:1)	Clear	2 hrs @ 100°C	1100 mPa.s	1,26 g/cm³	30 mm x 10 ⁻¹	Fluorogel, solvent and fuel resistant
Dowsil 3-4207	Silicone	2-part (1:1)	Translucent green	1,5 hrs @ 25°C	425 mPa.s	1,0 g/cm³	59 Shore 00	UL 94 V-1, toughened gel, primerless adhesion at room temperature

Assemblies

Battery Pack



Gasketing- sealing

Products	Chemistry	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	Durometer	Features & benefits
Silicones									
Dowsil 7091	Silicone	1-part	Black, grey, white	1,5 MPa (Al)	3 - 7 days @ 25°C / 50% RH	Non slump paste	1,4 g/cm³	32 Shore A	UL94 V-1, used as a Form In Place Gasket (FIPG)
Dowsil EA-3838	Silicone	2-part (2:1 by volume)	Black	1,4 MPa (Glass/SS)	7 days @ 25°C	Non slump paste	1,6 g/cm³	40 Shore A	Fast primerless adhesion development
Dowsil HM2510	Silicone	1-part	Clear	NA	1/8" bead: 2 days @25°C	110.000 mPa.s @ 120°C	1,07 g/cm³	38 Shore A	Moisture curing, reactive hotmelt

Products	Chemistry	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	Durometer	Features & benefits
MSP/hybrides									
Merbenit SF50	Silane Modified Polymer	1-part	Black, grey, white	NA	24-72 hrs @ 25°C dependant on thickness and rel. humidity	Paste	1,4 g/cm³	50 Shore A	Short resistant up to 200°C, free of solvents, isocyanates and silicones
Merbenit 2K60	Silane Modified Polymer	2-part (1:1)	Grey	NA	24hrs @ 25°C	Slightly thixotropic	1,37 g/cm³	48 Shore A	Fast strength build up, free of solvents, isocyanates and silicones
Plexus H4110	SMP-Epoxy	2-part (1:1 by volume)	Grey	5 MPa (Al)	24hrs @ 25°C	60.000 mPa.s	1,29 g/cm³	40 Shore D	Hybrid epoxy

Products	Chemistry	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	Durometer	Features & benefits
Polyurethanes									
Araldite 2028-1	Polyurethane	2-part (1:1)	Transparent	15 MPa (Al)	8 hrs @ 25°C/20 min @ 100°C	10.000 mPa.s	1,12 g/cm³	NA	Fast and invisible
Plexus PU2105	Polyurethane	2-part (1:1 by volume)	Grey	10 MPa (Al)	24hrs @ 25°C	70.000 mPa.s	1,57 g/cm³	70 Shore D	Low exotherm, no odour, combination of high strenght and stiffness

Products	Chemistry	1- or 2-part	Color	Adhesive Strenght	Cure time (UVA 320 - 395 nm)	Viscosity	Density	Durometer	Features & benefits
UV acrylates									
Dymax GA-201	Urethane-Acrylate	1-part	Opaque	NA	3 sec @ 10W/cm² 30 sec @ 250mw/cm²	65.000 mPa.s	1,01 g/cm³	35 Shore A	UV/VIS light curing, Compression set: 26% (22hrs @ 85°C)

EMI SHIELDING

Products	Chemistry	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	Durometer	Features & benefits
Dowsil EC-6601	Silicone	1-part	Tan	1,3 MPa	24-72 hrs @ 25°C	Paste	3,37 g/cm³	80 shore A	Electrically conductive

Assemblies

Battery Pack / Module



Structural adhesives

Products	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	Features & benefits
Methyl Methacrylate							
Plexus MA 300	2-part (1:1)	Cream/black	20.5 - 26 MPa	15 min @ 25°C, 75% of ultimate strength	A: 40.000 - 70.000 mPa.s B: 40.000 - 70.000 mPa.s	0,97 g/cm³	High strength
Plexus MA 420	2-part (10:1)	Blue/black	18.5 - 20.5 MPa	15 - 18 min @ 25°C, 75% of the ultimate strength	A: 100.000 - 125.000 mPa.s B: 35.000 - 80.000 mPa.s	0,98 g/cm³	Flexibel MMA
Plexus MA 830	2-part (10:1)	Grey	13.8 - 17.2 MPa	20 - 25 min @ 25°C, 75% of the ultimate strength	A: 80.000 - 120.000 mPa.s B: 35.000 - 80.000 mPa.s	0,98 g/cm³	Metal bonder without primer
Araldite 2051	2-part (1:1)	Pale yellow	>20 MPa (AI)	25 min @ 25°C	Non sagging	1,0 g/cm³	Fast curing to accelerate structural bonding operations, Pot life: 4 - 6 mins

Products	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	Features & benefits
Epoxies							
Araldite 2011	2-part (10:8)	Pale yellow	>19 MPa (AI)	10 hrs @ 25°C	30.000 - 45.000 mPa.s	1,05 g/cm³	Long working life, good resisittance to dynamic loading
Araldite 2012	2-part (1:1)	Yellow	> 20 MPa (AI)	20 min @ 25°C	30.000 mPa.s	1,18 g/cm³	Fast curing, self levelling
Araldite 2014-2	2-part (10:5)	Dark grey	> 14 MPa (AI)	8 hrs @ 25°C 2 hrs @ 40°C	Thixotropic paste	1,6 g/cm³	High temperature resistance, very resistant to water and a variety of chemicals
Araldite 2015-1	2-part (1:1)	Beige	>15 MPa (AI)	8 hrs @ 25°C 3 hrs @ 40°C	Thixotropic paste	1,1 g/cm³	Toughened, good resisittance to weathering
Araldite 2019	2-part (100:43)	Black	> 25 MPa (AI)	16 hrs @ 40°C 1h 80°C 3 hrs @ 80°C 30 min @ 150°C	Thixotropic paste	1,1 g/cm³	High strength and toughness, temperature resistance up to 140°C after post cure
Araldite 2031-1	2-part (100:120)	Black	> 20 MPa (AI)	15 hrs @ 25°C 3 hrs @ 40°C	Thixotropic paste	1,3 g/cm³	Toughened
Permabond ET505	2-part	Amber	18 - 21 MPa	72 hrs @ 25°C	19.000 mPa.s	1,15 g/cm³	Semi flexibel and toughened
Permabond ET538	2-part	Grey	18 - 20 MPa	72 hrs @ 25°C	195.000 mPa.s	1,25 g/cm³	Toughened, thixotropic, excellent gap fill and flow control
Perambond ET5401	2-part (2:1 by volume)	Grey	10 - 15 MPa (cured @ 25°C)	4 - 7 days @ 25°C	Paste	1,15 g/cm³	Improved temperature resistance
Permabond MT382	2-part (2:1 by volume)	Carbon black	6 - 8 MPa	72 hrs @ 25°C	25.000 mPa.s	1,15 g/cm³	Modified epoxy hybrid, low modulus
Permabond ET5428	2-part	Carbon black /cream	18 - 22 MPa	24 - 48 hrs @ 25°C 2 hrs @ 60°C	25.000 mPa.s	1,1 g/cm³	Excellent resistance to impact and vibration

Products	1- or 2-part	Color	Adhesive Strenght	Cure time	Viscosity	Density	CTE	Features & benefits
UV acrylates								
Dymax 6-621-VT	1-part	Translucent	22 - 26 MPa	2 sec @ 50mW/cm²	14.000 cP	1,08 g/cm³	64/196 ppm/K (&1/&2)	UV/VIS curing, secondary heat curing

Thermal management

Battery Module



Products	Chemistry	Color	Viscosity	Thermal conductivity	Cure time	Features and benefits
Thermally conductive gapfillers						
Dowsil TC-4515	Silicone, 2-part, 1:1	Blue	240.000 mPa.s	1,5 W/mK	2,5 hrs @ 25°C 30 min @ 80°C	UL94 V-0 Holds vertical position in cured and uncured state, soft and compressible once cured
Dowsil TC-4525	Silicone, 2-part, 1:1	Blue	217.000 mPa.s	2,5 W/mK	2 hrs @ 25°C 10 min @ 80°C	UL94 V-0, Holds vertical position in cured and uncured state, soft and compressible once cured
Dowsil TC-4535	Silicone, 2-part, 1:1	Blue	205.000 mPa.s	3,5 W/mK	2 hrs @ 25°C 10 min @ 80°C	UL94 V-0, Holds vertical position for a long service period, controlled silicone volatility
Electrolube GF 300	Silicone, 2-part, 1:1	Blue	140.000 mPa.s	3,0 W/mK	12 hrs @ 25°C 80 min @ 60°C	Low viscosity, low modulus prevents "pump out"
Electrolube GF 400	Silicone, 2-part, 1:1	Pink	220.000 mPa.s	4,0 W/mK	12 hrs @ 25°C 80 min @ 60°C	Low modulus prevents "pump out"
Sarcon SPG-50A	Silicone, 1-part	Light sky blue	5.000.000 mPa.s	5,0 W/mK	Non curing	Form in place gap filler, conformable with very low compression forces

Products	Chemistry	Color	Viscosity	Thermal conductivity	Cure time	Features and benefits
Thermally conductive encapsulants						
Dowsil EE-3200	Silicone, 2-part, 1:1	Black	1.700 mPa.s	0,5 W/mK	3 hrs @ 25°C	Low stress encapsulant, fast processing properties, UL94 V-0
Dowsil TC-6020	Silicone, 2-part, 1:1	Gray	10.640 mPa.s	2,7 W/mK	15 min @ 80°C	Good flowability, UL94 V-0

Products	Chemistry	Color	Viscosity	Thermal conductivity	Cure time	Features and benefits
Thermally conductive adhesives						
Dowsil SE 4486	Silicone, 1-part	White	20.000 mPa.s	1,6 W/mK	72 hrs @ 25°C	Moisture cure RTV, fast tack free
Dowsil 1-4173	Silicone, 1-part	Grey	60.000 mPa.s	1,8 W/mK	90 min @ 100°C	Self priming, flowable, high tensile strength
Dowsil TC-2030	Silicone, 2-part, 1:1	Grey	220.000 mPa.s	2,7 W/mK	60 min @ 130°C	High performance thermal interface, 2,7 MPa lap shear strength on Al
Dowsil TC-2035	Silicone, 2-part, 1:1	Reddish brown	125.000 mPa.s	3,3 W/mK	30 min @ 125°C	High performance thermal interface, 3,3 MPa lap shear strength on Al, min BLT 50µ
PermaBond MT3836	Modified hybrid silane polymer, 2-part, 2:1 by volume	Light grey	Paste	1,05 W/mK	> 72 hrs @ 25°C	UL94 V-0, Thermal conductivity: 1,05 W/mK
Dymax 9-20801	Acrylated Urethane, 1-part	White	110.000 mPa.s	0,9 W/mK	5 sec @ 200mW/cm² + 30 min 120°C	Multi-Cure: UV Light cure, secondary activator and heat cure

Battery cells

Battery Module



Assemblies

Products	Chemistry	Color	Viscosity	Cure time	Features & benefits
Adhesives					
Dymax 6-621-VT	Acrylated urethane, 1-part	Clear translucent	14.000 mPa.s	2 sec @ 50mW/cm² 60 min @ 110°C	UV/VIS curing, secondary heat curing
Dymax 9014	Acrylated urethane, 1-part	Light yellow translucent	18.000 mPa.s	3 sec @ 200mW/cm² + 7 days 25°C/50% RH	Flexibel encapsulant, shore A70, dual cure: primarily UV curing + secondary moisture cure for shadow areas
Dymax 9309-SC	Acrylated urethane, 1-part	Transparent blue	45.000 mPa.s	10 - 30 sec @ 200mW/cm²	See-Cure, high thixotropy, great shock/vibration performance
Born2bond Structural	Methoxyethyl cyanoacrylate, 2-part, 4:1	Translucent	Part A: 100.000 - 150.000 mPa.s Part B: 40.000 - 80.000 mPa.s	25 min @ 25°C	Long open time, instant adhesive

(Fire)protection

Products	Chemistry	Color	Viscosity	Cure time	Features & benefits
Potting/encapsulation					
Sylgard EE-3200	Silicone, 2-part, 1:1	Gray	1.700 mPa.s	3 hrs @ 25°C	Low stress encapsulant, UL94 V-0
Sylgard 567	Silicone, 2-part, 1:1	Black	1.500 mPa.s	120 min @ 100°C	Self priming, UL94 V-0, MIL-PRF-2358 6F (Grade B2) Type 1, Class IV QPL
Dowsil EG 3810	Silicone, 1-part	Clear	690 mPa.s	15 min @ 125°C	Low/high temperature gel, suitable for temperatures from -60°C to +200°C
Dowsil SE 4445 CV	Silicone, 2-part, 1:1	Black	15.000 mPa.s	30 min @ 120°C	Thermal conductive gel: 1,3 W/mK
Dowsil TC-3065	Silicone, 1-part	Gray	200.000 mPa.s	30 min @ 100°C	Soft thermal gel: 6,5 W/mK, low volatile content

Products	Chemistry	Color	Thermal conductivity	Cure time	Features & benefits
Foams					
Dowsil 3-6548	Silicone, 2-part, 1:1	Black	45.000 - 70.000 mPa.s	24 hrs @ 25°C	Exceptional fire resistant properties, density: 0,2 - 0,3 g/cm³, 60-120 sec snap time
Silastic 8257	Silicone, 2-part, 1:1	Black	Part A: 19.500 - 28.000 mPa.s Part B: 10.500 - 14.500 mPa.s	24 hrs @ 25°C	Gasket

Products	Liquid density	Viscosity	Boiling point	Vapour pressure	Dielectric strength range, 0,1" gap	Dielectric constant	Volume resistivity
Cooling fluids							
Novec 649	1,6 g/cm³	0,64 cPs	49 °C	40 kPa	> 40 kV/mm	1,8 @ 1kHz	1012 Ohm.cm
Novec 7000	1,4 g/cm³	0,45 cPs	34 °C	65 kPa	> 25 kV/mm	7,4 @ 1kHz	108 Ohm.cm
Novec 7100	1,51 g/cm³	0,58 cPs	61 °C	27 kPa	> 25 kV/mm	7,4 @ 1kHz	108 Ohm.cm
Novec 7200	1,42 g/cm³	0,58 cPs	76 °C	16 kPa	> 25 kV/mm	7,3 @ 1kHz	108 Ohm.cm
Novec 7300	1,66 g/cm³	1,18 cPs	98 °C	5,9 kPa	> 25 kV/mm	6,1 @ 1kHz	1.011 Ohm.cm
Novec 7500	1,61 g/cm³	1,24 cPs	128 °C	2,1 kPa	> 25 kV/mm	5,8 @ 1kHz	108 Ohm.cm
Novec 7700	1,8 g/cm³	4,54 cPs	167 °C	< 0,1 kPa	> 25 kV/mm	6,7 @ 1kHz	1.011 Ohm.cm

Converter/invertor, DC/DC converter, on board charger, charging module

Power Conversion



Thermal management

Products	Chemistry	Color	Thermal conductivity	Cure time	Features & benefits
Thermal conductive compounds: 0,9 - 5,2 W/mK					
Dowsil 340	Silicone, 1-part	White	0,6 W/mK	Non curing paste	MIL-DTL-47113 compliant
Dowsil TC 5080	Silicone, 1-part	White	1,0 W/mK	Non curing paste	Stable, high temperature performance
Dowsil TC 5021	Silicone, 1-part	Grey	3,3 W/mK	Non curing paste	Flowable, capable of achieving thin bond line thickness
Dowsil TC 5622	Silicone, 1-part	Grey	4,3 W/mK	Non curing paste	UL94 V-0
Electrolube HTCX	Non Silicone, 1-part	White	1,35 W/mK	Non curing paste	Excellent non creep characteristics, temperature range from -50°C to 180°C
Electrolube HTCP	Non Silicone, 1-part	White	2,5 W/mK	Non curing paste	UL94 V-0 Equivalent
Electrolube HTCPX	Non Silicone, 1-part	Light grey	3,4 W/mK	Non curing paste	Designed for gap filling applications

Products	Chemistry	Color	Thermal conductivity	Cure time	Features & benefits
Thermal conductive gap fillers: 1,5 - 5,0 W/mK					
Dowsil TC-4515	Silicone, 2-part, 1:1	Blue	1,9 W/mK	2,5 hrs @ 25°C 30 min @ 80°C	UL94 V-0 Holds vertical position in cured and uncured state, soft and compressible once cured
Dowsil TC-4525	Silicone, 2-part, 1:1	Blue	2,6 W/mK	2 hrs @ 25°C 10 min @ 80°C	UL94 V-0, Holds vertical position in cured and uncured state, soft and compressible once cured
Dowsil TC-4535 CV	Silicone, 2-part, 1:1	Blue	3,5 W/mK	2 hrs @ 25°C 10 min @ 80°C	UL94 V-0, Holds vertical position for a long service period, controlled silicone volatility
Electrolube GF 300	Silicone, 2-part, 1:1	Blue	3,0 W/mK	12 hrs @ 25°C 80 min @ 60°C	Low viscosity, low modulus prevents "pump out"
Electrolube GF 400	Silicone, 2-part, 1:1	Pink	4,0 W/mK	12 hrs @ 25°C 90 min @ 60°C	Low modulus prevents "pump out"
Sarcon SPG-50A	Silicone, 1-part	Light sky blue	5,0 W/mK	Non curing	Form in place gap filler, conformable with very low compression forces

Products	Chemistry	Color	Thermal conductivity	Cure time	Features & benefits
Thermal conductive adhesives: 0,8 - 3,3 W/mK					
Dowsil SE 4486 CV	Silicone, 1-part	White	1,6 W/mK	72 hrs @ 25°C	Moisture cure RTV, fast tack free, controlled volatility
Dowsil 1-4173 / 1-4174	Silicone, 1-part	Grey	1,8 W/mK	1,5 hr @ 100°C 30 min @ 125°C 20 min @ 150°C	Self priming, flowable, high tensile strength. Dowsil 1-4174 contains 178 µm glass beads
Dowsil TC-2030	Silicone, 2-part, 1:1	Grey	2,7 W/mK	1 hr @ 130°C	High performance thermal interface, 2,7 MPa lap shear strength on Al
Dowsil TC-2035 (CV)	Silicone, 2-part, 1:1	Reddish brown	3,3 W/mK	30 min @ 125°C 10 min @ 150°C	High performance thermal interface, 3,3 MPa lap shear strength on Al, min BLT 50µ. Also available with controlled volatility
Dymax 9-20801	Acrylated Urethane, 1-part	White	0,9 W/mK	5 sec @ 200 mW/cm² + 30 min 120°C	Multi-Cure: UV Light cure, secondary activator and heat cure

Converter/invertor, DC/DC converter, on board charger, charging module

Power Conversion



PCB protection

Products	Chemistry	Color	Thermal conductivity	Viscosity	Cure time	Features & benefits
Thermal conductive encapsulants: 0,3 - 2,7 W/mK						
Dowsil EE-3200	Silicone, 2-part, 1:1	Gray	0,5 W/mK	1.700 mPa.s	3 hrs @ 25°C	Stress relieving encapsulant with fast processing properties, UL 94 V-0
Dowsil TC-6020	Silicone, 2-part, 1:1	Gray	2,7 W/mK	10.640 mPa.s	15 min @ 80°C	Good flowability, UL94 V-0
Dowsil TC-4605 HLV	Silicone, 2-part, 1:1	Gray	1,0 W/mK	1.950 mPa.s	1 hr @ 120°C	UL94 V-0 @ 1,5mm
Dowsil CN 8760 G	Silicone, 2-part, 1:1	Dark gray	0,8 W/mK	3.200 mPa.s	24 hrs @ 25°C	UL94 V-0, UL RTI 150°C, good flowability for fast processing
Electrolube ER2220	Epoxy, 2-part, 20.8:1	Grey	1,5 W/mK	15.000 mPa.s	24 hrs @ 25°C 4 hrs @ 60°C 1 hr @ 100°C	Meets UL94 V-0
Electrolube ER2221	Epoxy, 2-part, 13.9:1	Black	1,2 W/mK	6.000 mPa.s	24 hrs @ 25°C 4 hrs @ 60°C 1 hr @ 100°C	Low viscosity
Araldite HW 2711-1	Epoxy, 2-part, 1:1	Brown	1,7 W/mK	5.800 mPa.s	1 hr @ 90°C + 1,5 hrs @ 140°C	UL 94 V-0, Thermal classe H
Arathane CW 660/ Arathane HY 5610	Polyurethane, 2-part, 100:15	Black	0,7 W/mK	2.000 mPa.s	24 hrs @ 25°C 6 hrs @ 80°C	UL 94 V-0

Products	Chemistry	Color	Thermal conductivity	Viscosity	Cure time	Features & benefits
Thermal conductive gels: 1,3 - 5,0 W/mK						
Dowsil TC-4060 (GB250)	Silicone, 2-part, 1:1	Blue	5,0 W/mK	426.000 mPa.s	24 hrs @ 25°C	250µ high purity glass beads for controlled BLT. Stress relieving, shock damping
Dowsil SE 4445 CV	Silicone, 2-part, 1:1	Grey	1,3 W/mK	15.025 mPa.s	30 min @ 120°C	UL 94 V-0, controlled volatility

Products	Chemistry	Color	Viscosity	Tack free time/Cure time	Features & benefits
Conformal Coatings					
Dowsil 1-2577 Low VOC	Silicone, 1-part	Transparant	1.050 mPa.s	6 min / 60 min @ 25°C	UL94 V-0, MIL-I-46058C, IPC-CC-830
Dowsil 3140 RTV	Silicone, 1-part	Translucent	34.400 mPa.s	116 min / 72 hrs @ 25°C	UL94 V-1, MIL-I-46058C, IPC-CC-830. Allows higher one-pass coating thickness
Dowsil SE9187L	Silicone, 1-part	Translucent/white/black	1.100 mPa.s	8 min / 5 hrs @ 25°C	Controlled volatility
Dowsil 3-19XX	Silicone, 1-part	Translucent	115 - 64.000 mPa.s	6 - 14 min / 60 min @ 25°C	UL94 V-0, MIL-I-46058C, IPC-CC-830
Electrolube DCA/ DCB/DCR	Modified Alkyd, 1-part	Transparent/black/red	180 - 650 mPa.s	2 hrs @ 25°C + 2 - 24 hrs @ 90°C	Excellent chemical and solvent resistance when heat cured, UL94 V-1, UL746E, IPC-CC-830, temperature resistance from -70°C till 200°C
Electrolube AFA	Acrylic, 1-part	Clear	175 mPa.s	5 - 10 min / 24 hrs @ 25°C	Aromatic free, UL94 V-0, UL746 E
Electrolube HFAC	Acrylic, 1-part	Pale	360 mPa.s	20 - 30 min / 24 hrs @ 25°C	UL94 V-0, high performance coating, aromatic free
Dymax 9483	Urethane acrylate, 1-part	Light Yellow	750 mPa.s	50 sec @ 200 mW /cm²	UV/Visible light with secondary moisture cure, UL94 V-0, UL746 E

Converter/invertor, DC/DC converter, on board charger, charging module

Power Conversion



Assemblies

Products	Chemistry	Color	Adhesive strength	Cure time	Features & benefits
Epoxy adhesives					
Araldite 2011	Epoxy, 2 part, 100:80	Pale yellow	26 MPa	24 hrs @ 25°C	Long working life, good resisittance to dynamic loading
Araldite 2012	Epoxy, 2 part, 100:100	Yellow	18 MPa	20 min @ 25°C	Fast curing, self levelling
Araldite 2014-2	Epoxy, 2 part, 100:50	Dark grey	17 MPa	8 hrs @ 25°C	Very long pot-life, thixotropic paste
Araldite 2015-1	Epoxy, 2 part, 100:100	Beige	20 MPa	24 hrs @ 25°C	Toughened, resistant to weathering
Araldite 2019	Epoxy, 2 part, 100:43	Black	> 25 MPa	16 hrs @ 40°C + 1h 80°C 3 hrs @ 80°C 30 min @ 150°C	High strength and toughness, temperature resistance up to 140°C after post cure
Araldite 2031-1	Epoxy, 2 part, 100:120	Black	22 MPa	15 hrs @ 25°C	Toughened

Products	Chemistry	Color	Adhesive strength	Cure time (UVA 320 - 395 nm)	Features & benefits
Acrylated adhesives					
Dymax 9-911-Rev B	Acrylated urethane, 1 part	Translucent	24 MPa	2 sec @ 50 mW/cm²	Wire tacking, Multi-Cure: UV/Visible light curing, secondary heat cure
Dymax 921 Gel	Acrylated urethane, 1 part	Translucent	36 MPa	4 sec @ 50 mW/cm²	Thixotropic, Multi-Cure: primarily UV/Visible light cure, includes secondary heat or activator cure
Dymax 9309-SC	Acrylated urethane, 1 part	Transparent blue	22 MPa	10 - 30 sec @ 200 mW/cm²	See-Cure, high thixotropy, great shock/vibration performance

Products	Chemistry	Color	Unprimed adhesive strenght	Cure time	Features & benefits
Silicone adhesives					
Dowsil 7091	Silicone, 1 part	White, grey, black	1,5 MPa (PA66GF30/Al)	Moisture curing: 3 - 7 days @ 25°C; Tack free: 28 min @ 25°C	UL94 V-1
Dowsil 744	Silicone, 1 part	White	1,5 MPa (PA66GF30/Al)	Moisture curing: 3 - 7 days @ 25°C Tack free: 40 min @ 25°C	UL94 HB
Dowsil 866	Silicone, 1 part	Grey	5,5 MPa (Al)	1 hr @ 125°C 30 min @ 150°C	Flowable, high strength
Dowsil 3-6265	Silicone, 1 part	Black	4,0 MPa (Al)	1 hr @ 125°C 30 min @ 150°C	Self priming, high strength
Dowsil EA-7100	Silicone, 1 part	Dark grey	3,0 MPa (Al)	15 min @ 100°C	Thermal radical cure and secondary moisture cure, UL94 HB
Dowsil EA-6060	Silicone, 2 part, 1:1	Grey	2,00 MPa (Al)	30 min @ 80°C 15 min @ 100°C	UL94 V-0, Fast, low temperature curing with UV indicator for inspection
Dowsil EA-4700CV	Silicone, 2 part, 1:1	Grey	3,9 MPa (Al)	2 hrs @ 25°C	Controlled silicone volatility
Silastic RBL-9694-20P	Silicone, 2 part 1:1	Grey	1,3 MPa (Vinyl Ester)	165 sec/115°C/90% RH	CIPG
Silastic RBL-9694-30P	Silicone, 2 part 1:1	Grey	1,0 MPa (Al)	46 sec/115°C/90% RH	CIPG
Silastic RBL-9694-40M	Silicone, 2 part 1:1	Grey	1,64 MPa (Al)	34 sec/115°C/90% RH	CIPG

Electric motor, electric transmission, electring driving housing

Electric Drive System



Assemblies

Products	Chemistry	Color	Viscosity	Thermal conductivity	Pot-life	Cure time	Features & benefits
Thermal Potting							
Dowsil EE-3200	Silicone 2-part, 1:1	Dark gray	1.700 mPa.s	0,5 W/mK	30 min @ 25°C	20 min @ 50°C	Low stress encapsulant, fast processing properties, UL94 V-0
Dowsil TC-6020	Silicone 2-part, 1:1	Gray	10.640 mPa.s	2,7 W/mK	77 min @ 25°C	5 min @ 100°C	Good adhesion to Aluminium, high thermal conductivity
Dowsil TC-4605 HLV	Silicone 2-part, 1:1	Gray	1.900 mPa.s	1,0 W/mK	130 min @ 25°C	60 min @ 120°C	UL94 V-0, hard elastomer offers also mechanical protection
Dowsil CN-8760	Silicone 2-part, 1:1	Dark gray	2.700 mPa.s	0,7 W/mK	90 min @ 25°C	40 min @ 50°C	UL94 V-0
Electrolube ER2220	Epoxy 2-part, 20.8:1	Grey	15.000 mPa.s	1,5 W/mK	120 min @ 25°C	24 hrs @ 25°C 4 hrs @ 60°C	Meets UL94 V-0
Electrolube ER2221	Epoxy 2-part, 13.9:1	Black	3.000 mPa.s	1,2 W/mK	60 min @ 25°C	24 hrs @ 25°C 2 hrs @ 60°C	Low viscosity
Araldite HW 2711-1	Epoxy 2-part, 1:1	Brown	5800 mPa.s @ 60°C	1,7 W/mK	400 min @ 60°C	1 h @ 90°C + 1,5 hrs @ 140°C	UL94 V-0, Thermal class H

Products	Chemistry	Color	Viscosity	Adhesive strenght	Handling time	Cure time	Features & benefits
Magnet Bonding							
Permabond TA436 & initiator 43	Structural Acrylic, no mix resin	Green	16.000 - 18.000 mPa.s	15 - 25 MPa	1 - 3 min	24 hrs @ 25°C	Very high strength bonding, toughened
Permabond TA439 & initiator 43	Structural Acrylic, no mix resin	Green	800 - 1.200 mPa.s	10 - 12 MPa	10 - 20 secs with initiator 43 40-75 secs with initiator 41	24 hrs @ 25°C	High temperature resistance: -55°C to 165°C, toughened
Permabond TA459 & initiator 41	Structural Acrylic, no mix resin	Blue	10.000 - 20.000 mPa.s	20 - 25 MPa	40 - 75 secs	24 hrs @ 25°C	High viscosity version of TA439, excellent adhesion to metals and ferrites, toughened
Permabond 825	Cyanoacrylate, 1-part	Transparent	100 - 150 mPa.s	15 - 20 MPa	5 - 20 sec	24 hrs @ 25°C	High temperature resistant
Born2Bond structural	Methoxyethyl cyanoacrylate, 2-part, 4:1	Translucent	Part A: 100.000 - 150.000 mPa.s Part B: 40.000 - 80.000 mPa.s	12 MPa	30 – 90 sec	25 min @ 25°C	Long open time, instant adhesive
Araldite 2052-1	Methacrylate, 2-part, 100:12 by weight	Red	80.000 mPa.s	> 25 MPa	15 - 20 min	30 min @ 25°C 15 min @ 40°C	Temperature resistant, toughened
Dymax 846-gel	Acrylated urethane, activator cure	Translucent straw	29.000 mPa.s	10 - 15 MPa	15 - 20 sec	24 hrs @ 25°C 1hr @ 90°C	High strength structural adhesive, use with activator 535-A-Rev A or 501-A-Rev A

Products	Color	Viscosity	Adhesive strenght	Handling time	Cure time	Features & benefits
Anaerobic threadlockers/retainers (acrylic)						
Permabond A1042	Blue	8.000 mPa.s	12 MPa	5 min	24 hrs @ 25°C	Rapid cure, Anäerobic threadlocker, lubricates threads , provides corrosion protection
Permabond A1046	Green	9.000 mPa.s	25 MPa	5 min	24 hrs @ 25°C	Rapid cure, retaining
Permabond HH131	Red	23.000 mPa.s	17 MPa	15 min	24 hrs @ 25°C	High temperature threadlocker
Permabond HM162	Green	1000 mPa.s	30 MPa	5 min	24 hrs @ 25°C	High temperature, retaining

Electric motor, electric transmission, electring driving housing

Electric Drive System



Assemblies

Products	Chemistry	Color	Viscosity	Adhesive strenght	Handling time	Cure Time	Features & benefits
Anaerobic threadlockers/retainers (acrylic)							
Born2Bond TA-43	Modified methacrylate	Blue	1.200 – 1.800 mPa.s	25 MPa	< 15 min	24 hrs @ 25°C	Oil tolerant
Born2Bond RA-20	Dimethacrylate ester	Green	5.000 – 12.000 mPa.s	> 26 MPa	60 min	24 hrs @ 25°C	High strength, high temperature resisant up to 230°C
Born2Bond RA-38	Urethane acrylate	Green	2.000 – 3.000 mPa.s	> 25 MPa	10 min	24 hrs @ 25°C	High strength, operating temperature up to 180°C
Born2Bond RA-48	Urethane methacrylate	Green	400– 600 mPa.s	>26 MPa	10 – 15 min	2 – 6 hrs @ 25°C	High strength, operating temperature up to 180°C

Products	Chemistry	Color	Viscosity	Adhesive Strenght	Handling time	Cure Time	Features & benefits
Wire reinforcement/ wire tacking / wire coating							
Permabond 825	Cyanoacrylate, 1-part	Transparent	100 - 150 mPa.s	15 - 20 MPa	5 - 20 sec	24 hrs @ 25°C	High temperature resistant
Permabond 920	Cyanoacrylate, 1-part	Transparent	70 - 90 mPa.s	19 - 23 MPa	15 - 20 sec	24 hrs @ 25°C	High temperature resistant, Approved MIL-A-46050C Type V Class 2
Permabond 2011	Cyanoacrylate, 1-part	Transparent	Thixotropic gel	20 - 24 MPa	5 - 10 sec	24 hrs @ 25°C	Non drip
Permabond ES 550	Epoxy, 1-part	Silver grey	1.000.000 - 2.000.000 mPa.s	27 - 41 MPa	NA	60 min @ 150°C	Good thermal conductivity: 0,55W/mK
Permabond ES 560	Epoxy, 1-part	Transparent	1.000 - 3.000 mPa.s	14 - 20 MPa	NA	60 min @ 100°C	Free flowing
Permabond ET 530	Epoxy, 2-part, 2:1 by volume	Transparent	400 - 700 mPa.s	10 - 12 MPa	8 - 12 hrs (pot life 60 - 150 min)	72 hrs @ 25°C	Low viscosity, also suitable for potting and encapsulation
Born2Bond Ultra serie	MECA (methoxyethyl cyanoacrylate)	Transparant	20 – 120.000 mPa.s	11 – 14 MPa	5 – 15 sec	24 hrs @25°C	Low odour, low blooming
Dymax 9014	Acrylated urethane, 1-part	Light yellow translucent	18.000 mPa.s	NA	NA	3 sec @ 200mW/cm² + 7 days 25°C/50% RH	Flexibel encapsulant, shore A70, dual cure: primarily UV curing + secondary moisture cure for shadow areas

Products	Chemistry	Color	Viscosity	Unprimed adhesive strenght	Tack free time	Cure Time	Features & benefits
Gasketing							
Dowsil 7091	Silicone, 1-part	Black, grey, white	Non flowing	1,5 MPa (Al)	28 min 25°C, 50% R.H.	3 - 7 days @ 25°C dependant on thickness and relative humidity	Used as a Formed-In-Place gasket(FIPG), UL94 V-1
Dowsil EA-3838	Silicone, 2-part, 2:1 / 4:1 by volume	Black	Non slump paste	1,4 MPa (Al)	5 - 8 min / 13 - 18 min	7 days @ 25°C	Early primerless adhesion development
Merbenit SF50	Silane modified polymer, 1-part	Black, grey, white	Paste	NA	8 min 25°C, 50% R.H.	24 - 72 hrs @ 25°C dependant on thickness and relative humidity	Short resistant up to 200°C, free of solvents, isocyanates and silicones
Merbenit 2K60	Silane modified polymer, 2-part, 1:1	Light grey	Slightly thixotropic	3 MPa (Al)	4 min	24hrs @ 25°C	Fast strength build up, free of solvents, isocyanates and silicones
Plexus H4110	Hybrid epoxy, 2-part, 1:1 by volume	Grey	60.000 mPa.s	5 MPa (Al)	8 - 12 min	24hrs @ 25°C	Hybrid epoxy
Araldite 2028-1	Polyurethane, 2-part, 1:1	Transparent	10.000 mPa.s	> 8 MPa (Al)	6 - 8 min	8hrs @ 25°C 20 min @ 100°C	Fast and invisible
Plexus PU2105	Polyurethane, 2-part, 1:1 by volume	Grey	70.000 mPa.s	10 MPa (Al)	3 - 5 min	24hrs @ 25°C	Low exotherm, no odour, combination of high strenght and stiffness

Mavom BV

Gouwelandenlaan 16
2408 ZG Alphen a/d Rijn
The Netherlands

T +31 (0) 172 27 6000
E info@mavom.nl
I www.mavom.nl

Mavom NV

Satenrozen 1A
2550 Kontich
Belgium

T +32 (0) 3 880 07 60
E info@mavom.be
I www.mavom.be

Mavom GmbH

Bahnhofstraße 35
48565 Steinfurt
Germany

T +49 (0) 2551 863 99 10
E info@mavom.de
I www.mavom.de



E-mobility