

BMW i



Sheer
Driving Pleasure



THE BMW i8 RESCUE GUIDELINE.

EDITORIAL.

With BMW i, the future is finally picking up speed. The BMW i3 and BMW i8 are garnering substantial interest, and the production team is working under intense pressure to keep up with demand. Overall, growth rates for electric vehicles have been soaring since 2012. Therefore, the recovery of vehicles involved in an accident and fitted with a high-voltage battery is expected to become more and more of an issue in the years to come for rescue crews such as yourself. The BMW i8 rescue manual will help to make sure you are well prepared.

The German Association of the Automotive Industry (VDA) has drawn up FAQ list of key recommendations for on-site emergency team operations. This list addresses general questions relating to the potential dangers of vehicles equipped with high-voltage systems. However, as with conventional vehicles, different models have specific requirements. This also applies to the BMW i8, with a high-performance plug-in hybrid system that combines the benefits of electric motors and petrol engines.

We will explain exactly what this means, as well as the resulting recommendations for you. You can rest assured that our engineers have been focusing on the safety of rescue crews since the BMW i8 entered development.

In close collaboration with a host of experts, we have created two documents that are designed to instruct you on how to behave at the scene of an accident: the rescue guidelines and the rescue data sheet.

Both documents are available to download free of charge from BMW at the bottom of the following websites:



DOWNLOAD

<https://oss.bmw.de/index.jsp>

The VDA answers frequently asked questions. The latest version can be downloaded at the following address:



DOWNLOAD

http://www.vda.de/en/arbeitsgebiete/rettungsleitfaeden_feuerwehr/index.html

These documents are also supplemented by our BMW i8 rescue manual. The aim of this manual is to clearly present the BMW i8 and its key safety features. Please use the manual to gain a general overview. More detailed and binding instructions for specific accidents – which we hope are rare – can be found in the rescue data sheet and guidelines.



CONTENTS.

The following chapter provides an introduction to the BMW i8, followed by an overview of the relevant safety features for rescue crews such as yourself. They are presented based on the various tasks to be performed in the event of an accident:

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1
THE BMW i8
AT A GLANCE.

THE BMW i8 AT A GLANCE.

THE BMW i8 IS THE MOST ADVANCED SPORTS CAR. AND THAT GOES FOR ITS SAFETY TOO.

For the first time, a sports car takes a holistic approach to sustainability throughout the value chain: carbon fibre production and vehicle assembly take place using 100% electricity produced from renewable sources.

From the outset, the BMW i8 was conceived as a plug-in hybrid drive. Unlike electric motors integrated retroactively, this makes the BMW eDrive technology an elementary part of the vehicle concept. And this holistic approach was applied to the entire architecture: the LifeDrive concept of the BMW i8 was specifically geared towards the vehicle's sporty character and, therefore, towards top driving performance.

Furthermore, the development of the LifeDrive architecture and its specific incarnation in the BMW i8 took into account the latest findings in safety and accident research, as well as the requirements of international crash test procedures.

THE RESULT: The BMW i8 sets new standards in safety too.



THE BMW i8 AT A GLANCE.

LIFEDRIVE CONCEPT. TWO MODULES, ONE GOAL: SUSTAINABLE SAFETY.

The LifeDrive architecture of the BMW i8 offers the ideal conditions for weight-optimised construction, a low vehicle centre of gravity and harmonious axle load distribution.

The central element in the Life module is the passenger cell made from CFRP. This comprises plastic reinforced with carbon fibres – also known as carbon. Despite the high-voltage battery, this extremely light and high-strength material enables a DIN kerb weight of just 1,485 kg. The drive systems are integrated into the aluminium Drive module and are located above the front axle of the electric drive system and the rear axle of the combustion engine. The high-voltage battery is placed extremely securely in the energy tunnel between the two drive systems. The power electronics and chassis components can also be found in the Drive module.

TOGETHER, THE LIFE AND DRIVE MODULES OPTIMISE THE SAFETY OF AUTOMOBILES:

Combined with the intelligently controlled distribution of forces, the high-strength passenger cell in the LifeDrive module ensures optimal occupant protection.

CFRP is a high-strength material, making it very resistant to damage. In the event of a crash, it can absorb an enormous amount of energy. Even at high impact speeds, it exhibits significantly less deformation than conventional vehicles. As in a Formula 1 cockpit, the extremely stiff material ensures passengers receive ultimate protection.

The extremely stiff material of the passenger cell and the crash-responsive aluminium structures on the front and rear of the Drive module ensure occupants are kept safe, even in an offset front crash that impacts the structure. The impressive safety performance of CFRP can also be seen in side-impact scenarios. Despite the huge and sometimes targeted forces involved, the material barely dents. Occupants are provided with the best possible protection.

THE BMW i8 AT A GLANCE.

49 G / KM

COMBINED CO₂ EMISSIONS

2.1 L

COMBINED CONSUMPTION PER 100 KM

266 KW

SYSTEM PERFORMANCE

1,485 KG

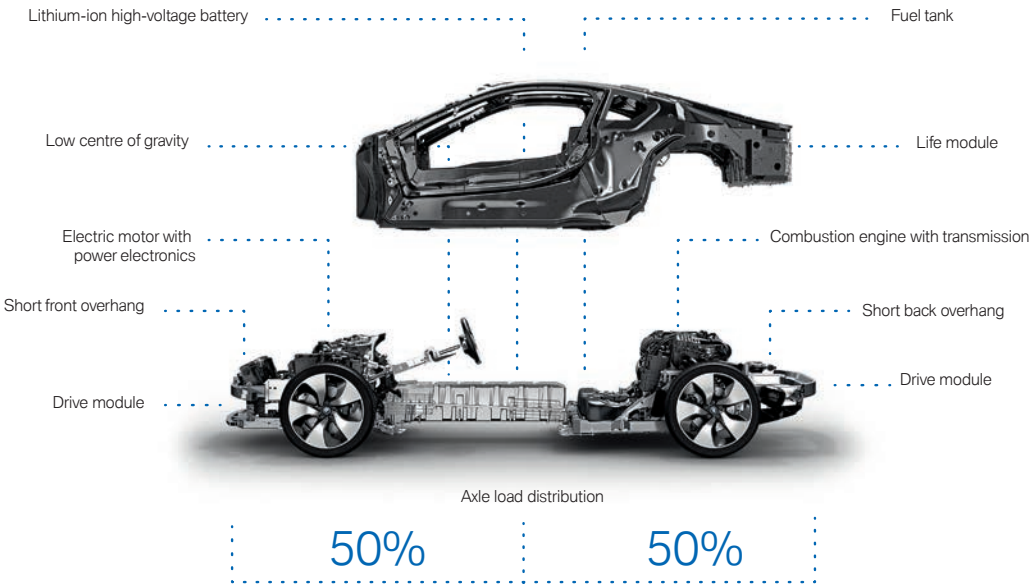
DIN KERB WEIGHT¹

4.4 S

ACCELERATION 0-100 KM/H

250 KM/H

TOP SPEED



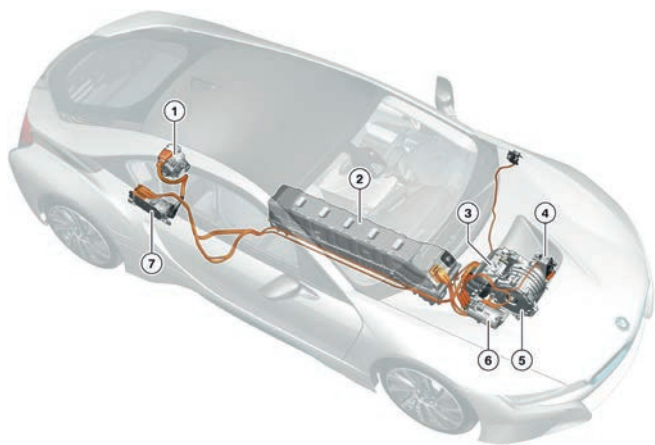
¹ The EC kerb weight is 1,560 kg.

THE BMW i8 AT A GLANCE.

THE HIGH-VOLTAGE BATTERY. DESIGNED BY BMW. FOR A HIGH LEVEL OF SAFETY.

The high-voltage battery provides the necessary energy to the BMW i8 electric motor and other components such as the starter generator and the air-conditioning compressor. Unlike many other manufacturers, BMW designs these batteries itself. This ensures a high level of safety and outstanding performance. This is yet another example of a perfect symbiosis between dynamics and sustainability: the renewable energy used to produce aluminium and the green electricity used for charging fully offset the emissions generated during battery production.

The high-voltage battery is located in the centre tunnel of the BMW i8 and is therefore outside the crash zone in most accidents. This increases the safety of both occupants and rescue crews.



- 1 High-voltage starter generator.
- 2 High-voltage battery.
- 3 Electrical machinery electronics.
- 4 Electric heating.
- 5 Electric motor.
- 6 Electric air-conditioning compressor.
- 7 Range extender electrical machinery electronics.

THE BMW i8 AT A GLANCE.

THE PLUG-IN HYBRID OF THE BMW i8 IS NEW. BUT THE MEASURES ARE FAMILIAR.

The BMW i8 has an innovative plug-in hybrid system that combines two high-performance drives: the 96 kW (131 h.p.) electric motor with lithium-ion high-voltage battery, and the newly developed 1.5-litre, 3-cylinder petrol engine with 170 kW (231 h.p.). For you, the rescue crew, this means that you must take into account both the new safety instructions for electric vehicles and the rules with which you are already familiar for dealing with conventional, combustion-engine vehicles. However, the many hybrid vehicles available from other manufacturers may have already introduced you to this situation.

SUMMARY: THE MOST ADVANCED SPORTS CAR THINKS ONE STEP AHEAD WHEN IT COMES TO SAFETY, TOO.

The BMW i8 combines two drives: an electric motor and a combustion engine. The way these two engines work together is revolutionary. But the resulting requirements for rescue crews such as yourself are not. The vast majority of measures to be taken are comparable with those for hybrid vehicles that have long since proven their mettle.

Naturally, there are also a number of aspects to be observed with the BMW i8. But you can rest assured that from the outset, safety was given top priority in developing the BMW i8 – and not just for the occupants, but also for you, the rescue crew.



2 SAFETY FEATURES OF THE BMW i8 AT A GLANCE.

SAFETY FEATURES OF THE BMW i8 AT A GLANCE.

THE BMW i8 OFFERS OCCUPANTS AND RESCUE CREWS A HIGH DEGREE OF SAFETY.

Although a large number of driver assistance systems are integrated into the BMW i8, even this innovative plug-in hybrid sports car can be involved in an accident. So how does this affect you? Will there be any risks involved during rescue, recovery and extinguishing operations? Can an electrical, thermal and toxic hazard ever be ruled out? The following will provide answers to the most important questions.

Even before its market launch, extensive tests demonstrated the safety of the BMW i8 for occupants and rescue crews alike. You can therefore rest assured that:

THE BMW i8 OFFERS AN EXTREMELY HIGH LEVEL OF SAFETY FOR RESCUE CREWS TOO.



ELECTRICAL HAZARD: HAVE NO FEAR.

You may be wondering whether you are at risk of an electric shock if you touch the BMW i8 after an accident. Because safety was a top priority from the outset of designing the vehicle, you can rest assured that the BMW i8 is safe to touch.

The BMW i8 is fundamentally an intrinsically safe high-voltage vehicle. In this case, intrinsically safe means that the high-voltage system generally switches itself off in the event of an accident with airbag deployment. At the same time, the cables outside of the high-voltage battery and the components in the high-voltage system are automatically discharged in just a few seconds. Therefore, by the time you arrive at the scene of the accident, there will no longer be any electrical potential left in the orange cables outside of the high-voltage battery. We have also taken additional measures – and the entire high-voltage system is self-contained.

THIS MEANS:

It is completely insulated and has no conductive connection to the body. Furthermore, all high-voltage components in the vehicle are positioned in such a way that they will only be damaged in the event of an extremely serious accident. Take, for example, the high-voltage battery. This is located in the centre tunnel of the BMW i8, outside the crash zone for most accidents, meaning that it is subject to almost no external forces in the event of an impact. In addition, the six battery modules are housed in a die-cast compartment for increased safety. All these measures virtually exclude any risk for rescue crews such as yourself.

With regard to the general electrical hazards posed by high-voltage systems, the German Association of the Automotive Industry (VDA) clearly concludes that:

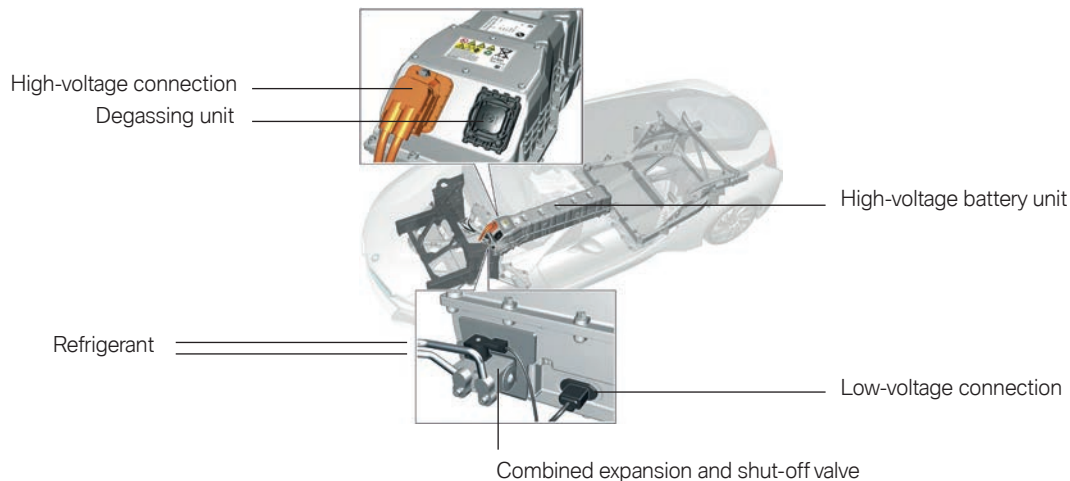


‘The risk of personal injury caused by an electric shock is highly unlikely.’¹

THERMAL HAZARD DUE TO HIGH-VOLTAGE BATTERY: AT LEAST AS SAFE AS CONVENTIONAL VEHICLES.

Safety was a key criterion when designing the BMW i models. A range of systems and measures have been implemented in the vehicle that ensure its safety during normal operations and accidents involving fire. The high-voltage system is designed such that it can handle accidents above and beyond the legal requirements. The high-voltage battery contains devices (such as a degassing unit) to ensure that gases occurring during a fire are discharged from the battery in a controlled manner.

LITHIUM-ION BATTERIES ARE ALSO SAFE IN THE EVENT OF A FIRE.



SAFETY FEATURES OF THE BMW i8 AT A GLANCE.

The renowned DEKRA competence centre made the following statement on the safety of electric and hybrid vehicles:

! We have carried out extensive tests, which covered aspects such as how flames might spread, temperature and smoke development, and what would be required to extinguish a fire, plus the pollution caused by run-off of the water used for fighting a fire. We have concluded that electric and hybrid vehicles fitted with lithium-ion drive batteries are at least as safe as vehicles with conventional drive systems.¹²

The combination of an electric motor and a conventional drive system generally presents no additional risk. It can be said that much less smoke and flames develop from energy stores than from burning petrol. The German Association of the Automotive Industry (VDA) confirms this:

! 'An explosion of high-voltage energy stores can almost certainly be ruled out.'¹³

SAFETY FEATURES OF THE BMW i8 AT A GLANCE.

HEALTH RISKS FROM GASES DURING A FIRE: REACTIONS TO FIRE SIMILAR TO CONVENTIONAL VEHICLES.

Our experience has shown that there are no significant differences between the plastics used in the BMW i8 and the blend of plastics used in conventional vehicles in terms of reactions to fire and extinguishability. This also applies to CFRP and its resin binding agent. As with conventional vehicles, a hazardous mix of flue gas is produced that must not be inhaled. Therefore:

AS WITH CONVENTIONAL VEHICLES, PERSONAL PROTECTIVE EQUIPMENT AND BREATHING APPARATUS MUST BE WORN.



SUMMARY: THE BMW i8 IS AS SAFE AS CONVENTIONAL VEHICLES.

Both the safety of occupants and rescue crews was at the fore when designing the BMW i3. Naturally, this also applies to the BMW i8. The result: both BMW i models are as safe as conventional vehicles.



3
RESCUE.

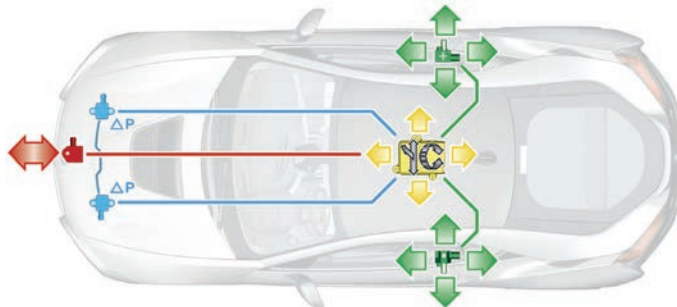
ELECTRICAL HAZARDS.

THE BEST PROTECTION AGAINST DANGEROUS CURRENT IS OFFERED BY THE BMW i8 ITSELF.

People don't always recognise the dangers of electrical current because they can't smell, hear or see it. So how can you be sure that you won't come into contact with electrical current in a BMW i8 that has been involved in an accident? The best protection is offered by the vehicle itself, as it has already met numerous safety measures on your behalf: the crash safety module monitors the vehicle and instantly detects an accident. Furthermore, the intrinsically safe high-voltage system automatically switches off in the event of a crash with airbag deployment.

THE FIRST STEP IN PROTECTION IS RECOGNISING AN ACCIDENT.

A central element is the crash safety module, which permanently monitors and evaluates all signals from sensors inside the vehicle. These not only instantly detect an accident, but also the direction of the crash and the strength of the impact. The airbags are also deployed as needed.



TRIPLE-SAFETY HIGH-VOLTAGE SYSTEM: SWITCH OFF, DISCONNECT, DISCHARGE.

The high-voltage system is intrinsically safe and automatically switches off in the event of an accident with airbag deployment. The high-voltage battery disconnects from the high-voltage system, ensuring no more electrical potential is present. At the same time, the cables and components of the high-voltage system discharge in just a few seconds. The entire high-voltage system is then fully discharged. An electrical hazard can then be ruled out.

- The high-voltage system is completely insulated and has no conductive connection to the body.
- As a rule, this allows you to touch the body of the vehicle without being exposed to an electrical hazard.
- The high-voltage battery is housed in a die-cast compartment. It is located in the centre tunnel, which means it is protected against shocks that could lead to critical internal damage.

RESCUE. ELECTRICAL HAZARDS.

DOS AND DON'TS.



Do not touch damaged high-voltage cables or components (the cables are always orange and are not located inside the Life module). Lithium-ion batteries are also safe in the event of a fire.



If in doubt, call the relevant emergency centre for qualified electricians.

For more information, please refer to the rescue guidelines and the chapter entitled RECOVER in this brochure.

SUMMARY: THE BMW i8 INCLUDES MANY SAFETY FEATURES FOR AVOIDING RISKS.

The BMW i8 is packed with innovative safety features. The system is completely insulated so that no electrical potential is connected to the body. In addition, the high-voltage system is intrinsically safe and switches off automatically in the event of a crash with airbag deployment. At the same time, the high-voltage system is discharged within a few seconds. Therefore, as a rule, by the time you arrive at the scene of the accident, there will no longer be any electrical potential left in the orange cables and the high-voltage components.



3 RESCUE.

PRACTICAL TIPS.

THE RESCUE PROCESS FOR A BMW i8 IS SIMILAR TO THAT FOR CONVENTIONAL VEHICLES.

Besides your own safety, you do of course also have to focus on rescuing vehicle occupants. Since the body of the BMW i8 is primarily made of aluminium, plastic and carbon, you will be faced with a different situation. In case you are wondering how you are going to get inside the vehicle, here's your answer: a rescue operation can be carried out using standard tools and is almost identical to that for conventional vehicles.

NO SPECIAL CHALLENGES FOR RESCUE CREWS.

During the development stage, we also thought about what would be the easiest possible way of rescuing occupants. The use of rescue cutters and spreaders should therefore not be a problem. In fact, there are even advantages over conventional vehicles made of high-grade steel. That is because aluminium, thermoplastics and carbon are easier to cut. You are therefore at no disadvantage when carrying out a rescue. The use of grinders is not recommended due to dust formation.

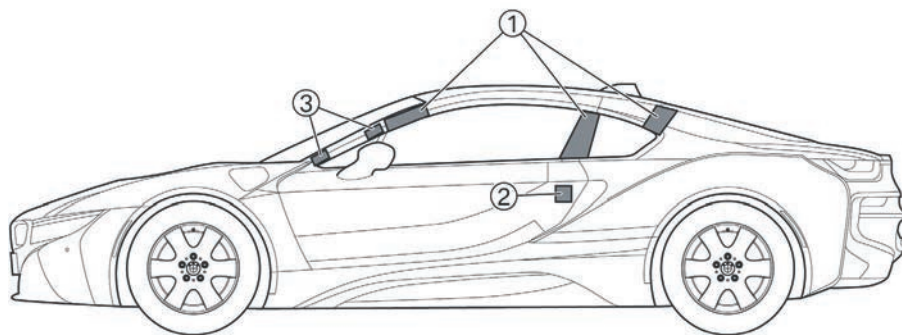
This was confirmed by standardised cutting tests performed on the BMW i8 in March 2014. Dr Tim Heyne, the supervisor responsible, wrote:

! 'The innovative drive concept and the generous use of new, state-of-the-art materials such as carbon (CFRP) and plastics in the body and passenger cell do not present fire and rescue crews with any special challenges.'⁴

THE RESULT IS TRULY POSITIVE:

! 'The process of rescuing occupants from a BMW i8 involved in an accident is similar to that of a conventional vehicle: the established rescue techniques and tactics get results. The rescue equipment currently used by fire brigades and rescue crews is sufficient.'⁵

The cutting tests showed that the process of rescuing occupants from a BMW i8 “constituted no special challenge compared with a conventional vehicle, even in serious accidents.”¹⁶ Nevertheless, we would like to take this opportunity to give you a few practical tips to help you get inside the vehicle. Take, for example, the swing-wing doors, which open upwards.



- 1 These areas indicate the points at which the roof can be severed. Modern high-performance cutters are required for cutting open the body; older hydraulic cutting devices may be insufficient.

The high-performance cutters must be used by trained personnel, in the intended manner.

- 2 Door lock.
- 3 Door hinges.

NOT NEW IN RESCUES. BUT NEW IN THE BMW i8.

As with conventional vehicles, you also have to switch off the BMW i8 and prevent it from rolling away. Due to the new control concept of the BMW i8, you may find some switches in unfamiliar places. We would therefore like to give you a brief overview. Further information can be found on the rescue data sheet and in the rescue guidelines:



- 1 Press the P button (1).
- 2 Push the switch (2) upwards to engage the electronic parking brake.

SUMMARY: THE BMW i8 ENSURES OCCUPANT SAFETY – EVEN DURING RESCUE OPERATIONS.

Rescue and recovery operations for the BMW i8 are almost identical to those of conventional vehicles. All rescue equipment and techniques meet all requirements. In addition, rescue tools can cut through carbon, thermoplastics and aluminium more easily than high-grade steel, for example. Angle grinders should not be used due to dust formation.



4
EXTINGUISH.

EXTINGUISH.

EXTENSIVELY TESTED IN FIRE SIMULATIONS: LITHIUM-ION BATTERIES IN ELECTRIC CARS.

The more vehicles with electric motors and high-voltage batteries there are on the roads, the more likely you are to be confronted with a fire here too. This gives rise to several questions: How much flame and smoke development will there be? Is there a risk of explosion? And can fire brigades even extinguish such fires? The results of extinguishing tests carried out by DEKRA show that electric cars with lithium-ion batteries are also safe in the event of a fire.

ELECTRIC CARS WITH LITHIUM-ION BATTERIES ARE ALSO SAFE IN THE EVENT OF A FIRE.

As with other hybrid vehicles, the BMW i8 has a combustion engine and thus a tank filled with fuel. However, this is located at the back of the vehicle and is thus separated from the high-voltage battery. As a rule, there is therefore no additional risk.



EXTINGUISH.

LITHIUM-ION BATTERIES DO BURN. BUT NOT AS INTENSIVELY AS PETROL.

The tests carried out by DEKRA involved setting three batteries alight using petrol. It took a few minutes of being exposed to flames at temperatures exceeding 800°C for the batteries to burn. In this case, the 'flame and smoke development was lower than with diesel or petrol.'⁷ According to DEKRA, this resulted in smaller flash fires less intense than those seen in petrol fires. However, the pressure generated inside the batteries as a result of the fire was channelled out through the in-built pressure relief valves.

BRANDSchutz/Deutsche Feuerwehr-Zeitung, the leading German publication for fire services, reaches a resounding conclusion:

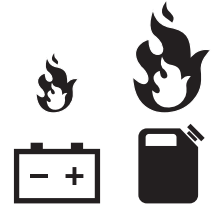
! 'There were no explosions. There was much less smoke generated from the batteries burning than was generated by burning petrol/diesel or a vehicle fire. The same applies to heat radiation. The temperatures tended to stay below those of burning fuel.'⁸



EXTINGUISH.

A FIRE CAN EASILY BE EXTINGUISHED – WITH WATER.

In principle, a lithium-ion battery fire can be extinguished with plenty of water. Furthermore, all standard and approved extinguishing agents for fire classes A and B can be used whilst respecting the relevant safety guidelines and observing safe distances. It is also important to note that the carbon fibres in the passenger cell are non-flammable. However, since these fibres are bound together by a resin, high temperatures can result in a resin fire (and smoke development). In any case, as with conventional vehicle fires, you should wear your personal protective equipment and breathing apparatus.



SUMMARY: THE BMW i8 ALSO OFFERS MAXIMUM SAFETY IN THE EVENT OF A FIRE.



‘Electric and hybrid cars with lithium-ion drive batteries are at least as safe as petrol and diesel vehicles in the event of a fire.’¹⁹

Furthermore, electrolyte is unlikely to leak out, and the pollution of the water is no higher than the water used to extinguish fires in conventional cars.



5
RECOVER.

RECOVER.

RECOVERING A BMW i8 IS NEARLY ALWAYS THE SAME AS RECOVERING A CONVENTIONAL VEHICLE.

In this case, 'recover' means removing a vehicle from the scene of the accident rather than transporting it back to the workshop. Nevertheless, the vehicle must still be moved. And naturally, it is important to know whether this is easily possible.

THE GENERAL RULE IS:

In nearly all cases, the BMW i8 is intrinsically safe – this also applies to recovery. Therefore, it can virtually always be handled like a conventional vehicle. If you have any questions, we recommend following the instructions in the rescue guidelines and data sheet.



RECOVER.

THE DEPLOYED AIRBAG INDICATES WHETHER THE HIGH-VOLTAGE BATTERY IS SWITCHED OFF.

In the event of normal and serious accidents, you can generally assume that the high-voltage system has been switched off. This is ensured by the crash safety cut-off mechanism, which is activated when the airbags are deployed.

THIS GIVES YOU A CLEAR INDICATION:

If the airbag has been deployed, the high-voltage system is switched off too. As the BMW i8 is intrinsically safe, the vehicle can be recovered by any fire brigade or certified recovery service.

IF YOU OBSERVE THE GUIDELINES, YOU CAN'T GO WRONG.

Naturally, the emergency rescue guidelines must also be observed when recovering a BMW i8. For example, the earth cable (black negative lead) should be disconnected from the 12-volt battery. Further information can be found in the rescue guidelines and data sheet.

RECOVER.

THERE ARE EXCEPTIONS. BUT VERY RARELY.

As with conventional vehicles, there are also a few exceptions with electric cars. For example, it may be the case that the BMW i8 is not in an intrinsically safe state. In order to exclude any risk, it is strongly advised that no further action be taken without consulting the instructions on the rescue data sheet and in the rescue guidelines:



RECOVERING THE BMW i8 FROM THE WATER.



RECOVERING THE BMW i8 AFTER A FIRE.



DAMAGE TO THE HIGH-VOLTAGE BATTERY.

SUMMARY: ON THE SAFE SIDE WHEN RECOVERING A VEHICLE.

The BMW i8 can nearly always be recovered like conventional vehicles. As the airbag is deployed in the event of most serious accidents, the high-voltage system is also switched off. In a few exceptional cases, the clear instructions in the rescue guidelines will assist you further. Often just a few precautionary measures are necessary to be on the safe side.



6
BREAKDOWN
ASSISTANCE AND
MINOR ACCIDENTS.

BREAKDOWN ASSISTANCE AND MINOR ACCIDENTS.

THE BMW i8 IS SAFE IN THE EVENT OF AN ACCIDENT. AND IN THE EVENT OF A BREAKDOWN.

Thanks to a variety of measures, drivers of the BMW i8 can rest assured that they are not exposed to an electrical hazard. This applies to most accidents – minor to serious – and, of course, to breakdowns. But does it also apply to you whilst providing breakdown assistance?

You'll be pleased to know that the answer is yes.

This is because the vehicle should be considered electrically intrinsically safe in the event of a breakdown. However, you should still take a few safety precautions.



THESE INSTRUCTIONS WILL HELP YOU TO HELP: THE RESCUE DATA SHEET FOR THE BMW i8.

Because the BMW i8 is intrinsically safe, no problems will occur in the event of a minor accident. However, one factor should be taken into account in contrast to serious accidents: since the airbags are not usually deployed in the case of minor accidents and breakdowns, the high-voltage system does not automatically switch off. Care should therefore be taken when handling the vehicle. As a rule, please do not touch the high-voltage components and orange cables.

YOU SHOULD THEN OBSERVE THE FOLLOWING INSTRUCTIONS FROM THE RESCUE DATA SHEET:

- Proceed as described on the rescue data sheet: If the engine is running or the display is active, press the START/6STOP button on the instrument cluster to turn off the ignition.
- Then, as also described on the rescue data sheet, disconnect the 12-volt battery and unlock the connector for the high-voltage rescue separation point to switch off the high-voltage system.
- No work should be carried out on the high-voltage components. This should only be done by those qualified to work on vehicles with high-voltage systems. This also applies if high-voltage components are damaged, or damage is ascertained whilst providing breakdown assistance. Work on high-voltage components may only be carried out in a certified specialist workshop.
- Even after the high-voltage system has been switched off, there may still be residual voltage. This will dissipate, however, in a few seconds.

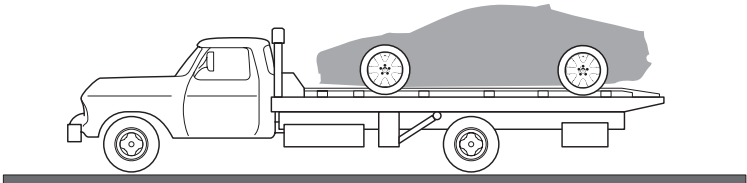
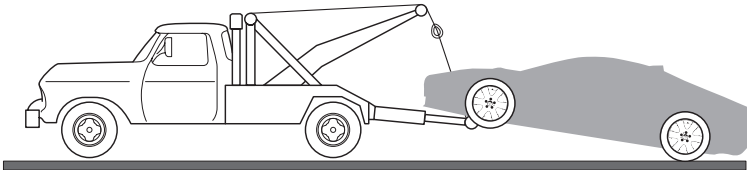
A BREAKDOWN NEEDN'T BE A PROBLEM IF YOU FOLLOW THESE TIPS.

The BMW i8 should therefore be considered intrinsically safe in the event of a breakdown or minor accident.

A FEW TIPS TO HELP YOU PROVIDE ON-SITE ASSISTANCE:

- If the 12-volt onboard electrical system is still working, you can make the vehicle roll by switching on the ignition with the START/STOP button, applying the brake and switching the selector lever to N.
- Jump-starting or charging the vehicle via the 12-volt onboard electrical system in the event of a breakdown is not permitted.
- The vehicle may not be towed by the axles, as the electric motor could supply current to the high-voltage system. The car may only be transported on a flatbed recovery vehicle (plateau vehicle).
- To bring the vehicle out of a danger zone, you may pull it extremely slowly over a short distance.
- Secure the vehicle during transport, for example using tension straps pulled through the wheel rims.
- Please observe national regulations.

BREAKDOWN ASSISTANCE AND MINOR ACCIDENTS.



SUMMARY: MINOR ACCIDENTS SHOULDN'T BE A PROBLEM. EVEN WHEN IT COMES TO SAFETY.

In most cases, there is no risk involved in providing breakdown assistance for the BMW i8. If you observe a few ground rules, such as not touching the high-voltage components and cables, the basic procedures are exactly the same as for vehicles with conventional drive systems.

According to the VBG, the general rule for providing breakdown assistance for electric vehicles is:

! 'There is no risk involved in providing breakdown assistance for vehicles with high-voltage systems, as long as no attempts are made to eliminate faults by interfering with the high-voltage system.'¹⁰



7
STORE,
INSPECT,
SECURE.

STORE, INSPECT, SECURE.

STORING THE BMW i8: FOLLOW THESE GUIDELINES AND YOU CAN'T GO WRONG.

If the BMW i8 is not taken straight to a BMW i service workshop after an accident, it must be stored outdoors in a designated parking area for vehicles involved in an accident. There should be no surprises in store. This is because, as an intrinsically safe vehicle, the same safety regulations apply as with conventional vehicles.

Please be sure to leave ample space between the vehicle and other vehicles, buildings and flammable objects. It goes without saying that the parking area should be accessible for the fire service and secured against unauthorised access. You should also mark the BMW i8 as an electric vehicle.





8
RESOURCES.



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Social Accident Insurance Institution for the Administrative Sector (VBG),
dated June 2011.



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Sheer
Driving Pleasure