

General Information on Selling and Transporting Fuel Cartridges

Always observe the safety instructions on the fuel cartridges.

SFC cannot provide legal counsel; moreover, regulations are subject to change. Reading the instructions that follow therefore does not exempt you from observing any subsequent legislation.

We will be happy to answer any questions you might have. Please address your questions to:

SFC Energy AG
Sales
Eugen-Saenger-Ring 7
85649 Brunnthal-Nord
Tel: +49 89 673 592-0
Fax: +49 89 673 592-369
sales@sfc.com
www.sfc.com

Sales

Fuel cartridges may be offered for sale only in a showroom.

We recommend that you observe the following when selling fuel cartridges.

- Do not display fuel cartridges in a self-service area. We recommend storing them in a secure area or displaying them in the showroom in a secured showcase.
- Purchasers must be at least 18 years of age.
- Fuel cartridges may be sold only to owners of an SFC Energy AG fuel cell.

Provide a handling Safety Data Sheet (see Appendix 2) whenever selling to retail customers. You can either download the document from www.sfc.com or request it from SFC.

Online Commerce (Sales)

The offer and sale of fuel cell cartridges for retail in on-line shops is prohibited. Please take such shops off line immediately because they represent a violation of laws prohibiting on-line sales of chemicals and are subject to prosecution.

Transportation and Forwarding of Fuel Cartridges

Transportation of fuel cells by road or rail is governed by the European accord on the international transportation of hazardous materials (ADR = Accord européen relatif au transport international des marchandises dangereuses par route)

Transportation of Fuel Cartridges in Private Vehicles (mobile homes)

The ADR makes an exemption for private individuals. The actual formulation is “exemptions in conjunction with the type of transportation” (“General Exemption”) per subsection 1.1.3.1a, which states, “The provisions of the ADR do not apply to: transportation of hazardous goods by private individuals inasmuch as the hazardous goods are packaged for retail and are for personal or household use or are intended for leisure activities or sports, provided steps have been taken to prevent the escape of contents under normal conditions of transportation.”

As a matter of principle, only small quantities of fuel cartridges should be transported. Take care to secure the load, even when transporting privately, i.e. make sure that all fuel cartridges, including spare cartridges, are securely fastened during transport by using the cartridge holders, for example.

Commercial Transport and Forwarding

We recommend working with qualified, reliable forwarding companies. We also recommend verifying that the vehicles are in good condition and that the load has been secured. As when shipping any hazardous material, you must engage a qualified personnel.

The provisions of the ADR apply to commercial transportation and forwarding. Among other things, the ADR stipulates:

- how personnel involved in transport are to be trained
- which goods may be transported
- how the goods are to be packed and labeled
- how the vehicle is to be equipped
- other special regulations

The ADR distinguishes between two cases:

1. transportation of up to 1,000 points (up to 200 fuel M5 cartridges or 100 M10 cartridges for a maximum of 1,000 liters)
2. transportation of more than 1,000 points

Several easements are available in the first case. They appear as 1,000-point rules in the following documentation. These rules apply the moment that the amount of hazardous materials transported exceeds a calculated value of 1,000 points (see 1.1.3.6 of the ADR).

UN3473 Fuel cell cartridges: 1 liter = 1 point

M5 = 5 points

M10 = 10 points

M28 = 28 points

It is possible to transport up to 66 M5 fuel cartridges or 33 M10 cartridges, not to exceed a total of 333 liters, without exceeding the 1,000 point rule.

Directives Concerning Filled Fuel Cell Cartridges for UN 3473 (see Chapter 3.2 of the ADR) at a Glance

ADR Directory of Hazardous Goods List of rules								Packaging			Transportation category
UN No.	Designation and Description	Class	Classification code	Packaging group	Risk tag	Special provisions	Quantity limitations	Instructions	Special provisions	Packing	
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	4.1.4	4.1.4	4.1.10	1.1.3.6 8.6
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(15)
3473	Fuel Cell Cartridges	3	F1	II	3	328	1L/E 0	P004		MP19	3 (E)

General Requirements for Transporting Hazardous Goods

The following rules must be observed.

- Personnel employed by companies as packers, expeditors, loaders or receivers must be identified as such and attend regular schooling (see Chapter 1.3 of the ADR).
- Packages and fuel cartridges must be properly and tightly sealed and must remain undamaged.
- Smoking is prohibited in or near the vehicle while loading.
- The load must be secured to prevent shifting.

1,000 Point Rule

Easements for Transporting Shipments (1,000 Point Rule) per 1.1.3.6 of the ADR.

If the quantity of hazardous goods to be transported does not exceed a calculated value of 1,000 points (see the table *Calculation of Maximum Permissible Amount*), the following directions must be adhered to in addition to the General Requirements (see above).

- Only permissible packaging may be used.
- Packages must be identified with UN number and risk tags.
- Load must be securely fastened.
- A 2 kg fire extinguisher for Class A, B and C fires must be on board.
- We recommend forwarding papers in accordance with directives.
- All personnel involved must be trained.
- Voluntary written instructions (accident memorandum) per 1.1.3.6 of the ADR are not necessary.

If no use is made of easements or exemptions (more than 1,000 points), the following points must be observed.

- The vehicle must exhibit two orange warning signs.
- Areas in which the vehicle parks for any length of time must be secured, well illuminated and off limits to the public.
- Forwarding papers, written instruction (see Appendix 1) and ADR certificate must accompany the shipment.
- Only authorized personnel may ride with the shipment.
- Items of equipment per written instructions (see Appendix 1) must accompany the shipment.
- Every crew member must carry photo identification during transport.
- Forwarder must name a hazardous materials expert (see Chapter 1.8.3 of the ADR).

Accompanying Documents

Every transport of goods that is subject to the ADR requires the documents listed below (see 5.4.1. of the ADR).

- Forwarding papers from the sender (bill of delivery)
- Written instructions (accident memorandum) (voluntary if the 1,000 Point Rule applies) in the languages of all countries traversed and in the language of the driver (see 5.4.3 of the ADR)
- ADR certification of driver training (in excess of 1,000 points)

Forwarding papers (bill of delivery) serve to identify the hazardous materials on board. The following declarations are necessary when transporting fuel cartridges (see Chapter 3.2 of the ADR, and Chapter 5.4 of the ADR):

Declarations	Example
• UN number:	UN 3473
• Designation (official name of material):	Fuel Cell Cartridges
• Number of risk tags:	3
• Packaging group:	II

Additionally,

Declarations	Example
Number and description of packages:	The number of fuel cartridges (canisters) being transported
Total amount of hazardous materials	In liters and kilograms
Name and address of sender and receiver	

Example: Forwarding 10 M5 fuel cartridges in original packaging containing 2 fuel cartridges per carton

“10 canisters UN 3473 Fuel Cell Cartridges, 3 (6.1), II, 50 l net, 50 kg gross”

Packaging

We recommend using original SFC fuel-cartridge packaging as it conforms to current ADR specifications for shipping. Should other packaging be used, it must conform to ADR regulations with regard to permission and labeling. Should you choose to repack fuel cells, you should be aware that doing so will make you packager in the eyes of the ADR. Additional stipulations apply for packagers. Please ask your hazardous materials expert.

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Appendix 1: Written Instructions

Appendix 2: Safety Data Sheet