

Training and Test Specification for Training Provider Courses & Examinations of Lithium Battery Consignments

Fully Regulated Lithium Batteries

This test specification applies to stand-alone 'open' training programmes run by Training Providers **for fully regulated batteries**, i.e. those which must be accompanied by a dangerous goods transport document (shipper's declaration) where a dedicated Lithium Battery certificate/record of training is produced upon the successful completion of the test at the end of the training programme. The programme may be bolted on to an existing DG course or as a totally separate programme. Either way as an end test is required this test specification applies. Where a separate exam has been sat it is common practice to produce a certificate. Where a certificate is provided this must bear the Student Registration number and the full title of the course covering what was covered (e.g. all Lithium Batteries) should be shown on the certificate/record of training. It should also state that the training and assessment complies with the CAA test specification for Lithium Batteries. Where a separate examination is taken a student registration number must be allocated.

Bespoke Lithium Batteries training and assessment

For bespoke training programmes specifically geared to the requirements of the customer where, for example, they perhaps only ship one UN number of Lithium Battery an abridged test may be constructed using as much of the test specification as possible. Where only one UN number is shipped only 1x marking and labelling question may be used in Part B (rather than the 2 stipulated). The end certificate/record of training must detail what was covered on the programme (e.g. Lithium Battery – {UN 3481 only}) and bear a student registration number. Where abridged versions have been used please keep records of how and why the test deviates from the specification below. In this case the certificate/record of training must indicate that it is bespoke training and assessment for a particular client and mention that it falls outside of the CAA Lithium Battery Test specification.

Section II Lithium Batteries

For those shipping Section II Lithium Batteries, please refer to IATA DGR 1.6 and the IATA Lithium Battery Guidance Document for details of the areas that should be covered as a minimum. There is no requirement for a test following instruction on shipping Section II Lithium Batteries, but adequate instruction is required. Incorrect shipments present a flight safety hazard and can result in severe legal penalties on the shipper. Accordingly, IATA specifies that all employees involved in the process of preparing Section II lithium battery shipments must be taken through the procedure to ensure that they understand and can demonstrate the correct application of documented procedures for the packing, labelling, marking and documentation requirements, as applicable to their job function. A record must be maintained that identifies each applicable employee and the date(s) that this instruction was provided. Many Training Providers may wish to follow good practice training procedures and use tests/exams following training to confirm knowledge and understanding. Where tests/exams have been used it is also common practice to issue certificates following training. If a certificate is provided this should state that only Section II Lithium Batteries have been covered in the training and assessment. If Section II batteries have been included in a training course covering all Lithium Batteries this may be included on the certificate for the main Lithium Battery course.

Marking

Exam paper to contain Part A (Core) and Part B (Application). **Part A and B to be undertaken at the same time. Part A may be multiple choice or long answer (pass mark varies depending upon style chosen). Part B is the application in practical terms and may not be multiple choice.**

Pass mark to be 75% unless multiple choice questions are used in the core (A) in which case the pass mark is raised to 80% (where at least 75% of the questions in Part A are in the multiple choice format).

No specific operators course test specification has been developed as it is mostly shippers who will need this specialist knowledge. Operators who wish more detailed knowledge will need to attend the Lithium Battery course for shippers.

Total number of points available and the Pass mark for the exam paper needs to be given on the student's paper along with the name of the marker. Pass is required in part B (as per mainstream exam papers). Exam conditions as per mainstream exams.

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Table 2 Objectives for Each Area of a Training Programme

Italic & Underscored text indicates the areas of training in Table 1.5A

Area of Training	Responsibilities of Shippers/Packers and Cargo Agents for Lithium batteries <i>At the end of the session students should be able to:</i>	Include in Exam	Core (A)/or (B)	Nr of questions	Points for question	Level of difficulty(H/M/L)	Comments	Where in training programme?	Where in exam if required (i.e. got 'Yes' in Exam column)
1a <u>UK Law, Applicability and</u>	<ul style="list-style-type: none"> Quote the title of the UK legislation on the transport of Lithium batteries by air State who the regulations apply to and their responsibilities 	No					Cover in training but not in exam		
	<ul style="list-style-type: none"> The training requirements for staff handling Lithium batteries by air 	Yes	A	1	1	L			
1b <u>General Philosophy (Appendices)</u>	<ul style="list-style-type: none"> identify the general principles applicable and locate specific information from all chapters and appendices of the IATA DG regs. 	Yes*	A	1	1	L	*May be omitted if already covered in DG exam		
2. Limitations									
2.1 Forbidden / damaged /defective Lithium batteries	<ul style="list-style-type: none"> Identify when lithium cells or batteries are forbidden 	Yes	A	1	1	L	UN3536 Lithium Batteries installed in cargo transport unit		
2.2 Hidden dangerous goods (<u>recognition of undeclared dangerous goods</u>)	<ul style="list-style-type: none"> Identify the types of general cargo that may contain hidden Lithium batteries 	Yes	A	1	1	L			
2.3 <u>Pax and crew</u>	<ul style="list-style-type: none"> Identify what DG pax and crew are permitted to take on an aircraft 	Yes	A	1	1	L			

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2.4 Transport by post	<ul style="list-style-type: none"> Determine the restrictions that apply to the transport of Lithium batteries in air mail and the correct method of sending them. 	Yes	A	1	1	L	The provisions for lithium batteries packed with equipment permitted domestically under UKCAA, MCA and DfT authorisations should be included in training for UK-based candidates and there then should be a question on this e.g. to verify that candidates understand that the UK provisions do not apply to international mail. Further details can be found on the Royal Mail website		
2.5 Variations	<ul style="list-style-type: none"> Apply appropriate state variations to Lithium battery consignments 	Yes*	A/B	1	1	M	*May be omitted as a separate question if covered later in Part B		
	<ul style="list-style-type: none"> Apply appropriate operator variations to Lithium battery consignments 	Yes*	A/B	1	1	M	*May be omitted as a separate question if covered later in Part B		
<u>3. Classification</u>									
3.1 Class	<ul style="list-style-type: none"> Define cells/batteries and other commonly used terms such as battery packs, battery assemblies and power banks. 	Yes	A	1	1	L	Experience shows shippers do not understand the differences and they then can't properly ensure that there is evidence particularly that an assembly or battery pack is properly tested, etc		
	<ul style="list-style-type: none"> Assign Lithium batteries to the appropriate UN number and Proper shipping name. 	Yes	A	1	1	L	Refers to 3.9.2.6. (and 4.2) Provide an extract of a test certificate and ask student to assign PSN & UN Nr		
	<ul style="list-style-type: none"> Identify the safety provisions that Lithium Batteries (UN3090, UN3091, UN 3480 and UN3481) must meet 	Yes	A	1	1	M	Create question from 3.9.2.6.1 (a-g)		
<u>4. Identification</u>									

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4.1 Proper shipping names and UN numbers	<ul style="list-style-type: none"> Select the correct proper shipping name and UN number for a Lithium battery 	Yes	B	1	1	L	Give a scenario ask student to assign PSN & UN Nr as part of marking and labelling		
4.2 Special provisions	<ul style="list-style-type: none"> Apply appropriate special provisions to a consignment of Lithium batteries (excluding damaged/defective as covered by above) 	Yes	A	1	1	M	Include one from: A88 Prototype A99 Exceeding 35kgk A183 Waste, A331 SoC		
	<ul style="list-style-type: none"> State how approvals required under Special provisions are obtained 	No					Cover in course but not in exam		
5. Packing									
5.1 Selecting packaging	<ul style="list-style-type: none"> Select the appropriate packaging 	Yes	B	2	1	M	Select UN Spec mark on package		
5.2 Overpacks	<ul style="list-style-type: none"> State how multiple packagings of Lithium batteries in overpacks may be consigned 	Yes*	A	1	1	M	*May be omitted if overpacks covered in main DG exam		
5.7 <u>Packing Instruction</u> Format and content	<ul style="list-style-type: none"> Accurately a) locate the relevant Packing Instruction and section 	Yes*	A	1	1	L	*May be omitted if covered in main DG exam		
	<ul style="list-style-type: none"> b) apply information from the relevant <i>section</i> of the Lithium batteries Packing Instructions 	Yes	B	1	1	L	Ask for Packing Instruction reference in question and give space for it in answer.		
6. Packaging specifications and performance tests									

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6.1 Testing of packagings	<ul style="list-style-type: none"> state the testing requirements for UN Specification packagings to be used for Lithium batteries 	Yes					Exam question to cover Section IA package requirements , i.e. that you can't just use any rigid UN spec package. It must have been tested to contain articles of a similar size and mass to the items being shipped (or be retested) and the shipper must follow the manufacturer's instructions for use. (See PI 965 Sec1A reqmts.)		
	<ul style="list-style-type: none"> state the testing requirements for non-UN Specification packagings to be used for Lithium batteries 	No					Cover in training but not in exam		
6.2 Packaging specification markings	<ul style="list-style-type: none"> Interpret the UN Specification Markings used for various types of UN Packagings (including qualification codes such as salvage etc) and determine whether the package is appropriate for its intended contents 	Yes*	A	1	1	M	Focus on common packagings used to LiBa *May be omitted if covered in main DG exam		
<u>7. Marks and Labelling</u>									
7.1. Marking	<ul style="list-style-type: none"> Appropriately select marks relative to the size of packaging 	No					Cover in training but not exam		

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	<ul style="list-style-type: none"> Appropriately position and apply marks to consignments of Lithium batteries 	Yes	B	2	Multiple	M	As per normal DG exam. Part B 2x different UN numbers one UN spec one not. ½ for addresses, 1pt for each correct item (probably total of 6 pts)		
7.2 Labelling	<ul style="list-style-type: none"> Appropriately position and apply appropriate hazard and handling labels to consignments of Lithium batteries 	Yes	B			L	See above		
8 Dangerous Goods transport documentation <i>(Shippers Declaration)</i> and other relevant documentation									
8.1 Completion of the dangerous goods transport document/ Shipper's Declaration	<ul style="list-style-type: none"> Accurately complete a dangerous goods transport document// Shipper's Declaration 	Yes	B	1.5	Multiple	H	Shipper 1x full SD (matches the labels on previous consignment) (one with UN Spec) and the other just the middle section as per CAA main DG exam. (e.g. transport details, shipment type, nature and quantity of DG. additional handling info.)		
8.2 Completion of the Air Waybill (or similar document)	<ul style="list-style-type: none"> Correctly complete an Air Waybill (or similar document) 	No					Cover in training but not in exam		
8.5 Retention and dissemination of information	<ul style="list-style-type: none"> identify which documents are required to be retained and for how long 	No					Cover in training but not in exam		

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Optional Section II provisions.

Some training providers may wish to include training students in the carriage of Section II Lithium Batteries in their Lithium Battery courses. The IATA requirements (1.6) mention that the appropriate packing instructions include a requirement that ‘Any person preparing or offering cells or batteries for transport must receive adequate instruction of these requirements commensurate with their responsibilities.’. Since there is no prescribed requirement for an end test/exam the CAA are not able to include the assessment of Section II Lithium Batteries in this test specification. As a minimum the adequate instruction should cover:....

Area	Training	
Section II Lithium Batteries	<ul style="list-style-type: none">• Minimum “adequate instruction” as listed in IATA 1.6.2	Training Provider devised training and demonstration of the correct application of documented procedures
	<ul style="list-style-type: none">• Subject areas listed in Section II requirements of the appropriate Packing Instructions 965-970	Training Provider devised training and demonstration of the correct application of documented procedures