



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)  
WORKING GROUP MEETING (DGP-WG/18)**

**Montréal, 1 to 5 October 2018**

**Agenda Item 1: Harmonizing ICAO dangerous goods provisions with UN Recommendations on the Transport of Dangerous Goods**

**1.2: Develop proposals, if necessary, for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2021-2022 Edition**

**DANGEROUS GOODS TRAINING**

(Presented by H. Brockhaus)

**SUMMARY**

This working paper proposes revisions to the training provisions in Part 1;4 of the Technical Instructions. The purpose is to clarify and simplify the provisions.

**Action by the DGP-WG:** The DGP-WG is invited to consider the proposed amendments to Part 1;4 as shown in Appendix A and Appendix B to this working paper.

**1. INTRODUCTION**

1.1 New competency-based training provisions were developed at DGP/26 which included amendments to Part 1;4 and supporting guidance material (see paragraph 2.1.4 of the DGP/26 Report).

1.2 The following criteria are set for new, improved training:

- a) adaptation of the training to the work of the employee;
- b) adaptation of the training to the activity of a company; and
- c) worldwide comparability of training within the field of activity.

1.3 Appendix B to this working paper can be seen as an additional option for the current training programme.

1.4 In order to be able to establish flexibility and comparability of the training world-wide, this working paper divides the individual activities together with job description, training focus and training times. This enables a company to carry out customized training or obtain standardized training from training providers.

## 2. **ACTION BY THE DGP-WG**

2.1 The DGP-WG is invited to:

- a) add the note in Part 1;4.1 as shown in Appendix A to this working paper.
- b) discuss and to implement the proposal as shown in the Appendix B to this working paper.

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**APPENDIX A**

**PROPOSED AMENDMENT TO PART 1 OF THE TECHNICAL INSTRUCTIONS**

**Part 1**

**GENERAL**

...

**Chapter 4**

**TRAINING**

**4.1 DANGEROUS GOODS TRAINING PROGRAMMES**

**4.1.1 Establishment and maintenance**

Initial and recurrent dangerous goods training programmes must be established and maintained by or on behalf of:

- a) shippers of dangerous goods, including packers and persons or organizations undertaking the responsibilities of the shipper;
- b) operators;
- c) ground handling agencies which perform, on behalf of the operator, the act of accepting, handling, loading, unloading, transferring or other processing of cargo or mail;
- d) ground handling agencies located at an airport which perform, on behalf of the operator, the act of processing passengers;
- e) agencies, not located at an airport, which perform, on behalf of the operator, the act of checking in passengers;
- f) freight forwarders;
- g) agencies engaged in the security screening of passengers and crew and their baggage and/or cargo or mail; and
- h) designated postal operators.

*Note.— Initial and recurrent dangerous goods training programmes can also be established and maintained by training organizations who are not named in a) to h).*

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**APPENDIX B**

**PROPOSED AMENDMENT TO PART 1 OF THE TECHNICAL INSTRUCTIONS**

**Part 1**

**GENERAL**

...

**Chapter 4**

**TRAINING**

...

**4.2 TRAINING CURRICULA**

4.2.1 Competency description in connection with forwarding air cargo, baggage und passengers

a) Competency shipper:

i) Classify dangerous goods:

ii) Identify dangerous goods:

iii) Generate and provide required documents:

iv) Sign transport documents:

v) Determine packing material:

vi) Prepare packaging:

vii) Proper closure of packaging:

viii) Marking and Labelling; and

ix) Compliance with all national and international regulations in connection with the transport of dangerous goods (variations by states and operators).

b) Competency packer

i) Determine packing material:

ii) Assemble the packaging:

iii) Proper closure of packaging; and

iv) Marking and Labelling.

c) Competency of forwarder's staff involved in processing dangerous goods

i) Review the documents:

ii) Review the freight:

iii) Prepare the airway bill;

iv) Organizes the delivery according these regulations to the operator; and

- v) Compliance with all national and international regulations in connection with the transport of dangerous goods (variations by states and operators)
- d) Competency of forwarder's staff involved in processing cargo or mail (other than dangerous goods)
  - i) Review the documents;
  - ii) Review the freight;
  - iii) Identify dangerous goods
  - iv) Prepare the airway bill that does not affect dangerous goods; and
  - v) Organizes the delivery according these regulations to the operator.
- e) Competency of forwarder's staff involved in the handling, storage and loading of cargo or mail
  - i) Review the freight;
  - ii) Preparation of bulk units including dangerous goods;
  - iii) Loading and unloading of vehicles; and
  - iv) Handling and storage of cargo and/or mail.
- f) Competency Operator's acceptance staff
  - i) Review cargo according the regulations of ICAO T.I.;
  - ii) Review documents according the regulations of ICAO T.I.;
  - iii) Physical Check of consignments containing dangerous goods (e.g. packages, overpack, BUP etc.);
  - iv) Preparation of dangerous goods acceptance check list; and
  - v) Reporting of dangerous goods incidents and occurrences.
- g) Competency Operator's and ground handling agent's not handle dangerous goods and/or handles documents/ data of a consignment (Import and Export)
  - i) Review the documents; and
  - ii) Review cargo and/or mail.
- h) Competency Operator's and ground handling agent's involved in the handling, storage and unloading/loading of cargo or mail and baggage
  - i) Review cargo, mail and/or baggage;
  - ii) Preparation of unit load devices including dangerous goods;
  - iii) Loading and unloading of aircrafts and unit load devices;
  - iv) Handling and storage of cargo, mail and/or baggage; and
  - v) Process data of a consignment connected with dangerous goods (e.g. preparation of NOTOC, booking of dangerous goods, creating cargo manifest).
- i) Reporting of Dangerous Goods incidents and accidents
  - i) Competency passenger handling staff
    - i) Provide information to passengers and crew; Perform Passenger Check In procedures;
    - ii) Generate boarding pass;
    - iii) Baggage acceptance; and
    - iv) Passenger handling (incl. Mobility, nonstandard baggage and bulky baggage).

- j) Competency flight crew
  - i) Supervision of aircraft loading (securing, segregation);
  - ii) Inspection for damage or leakage;
  - iii) Confirmation of the Notification to Captain (NOTOC);
  - iv) Sign the NOTOC;
  - v) Perform emergency response; and
  - vi) Reporting of dangerous goods incidents and occurrences.
- k) Competency flight dispatcher
  - i) Receive NOTOC;
  - ii) Perform emergency response; and
  - iii) Reporting of dangerous goods incidents and occurrences.
- l) Competency load planners, ramp agents
  - i) Supervision of aircraft loading (securing, segregation);
  - ii) Inspection for damage or leakage;
  - iii) Preparation of the Notification to Captain (NOTOC);
  - iv) Sign the NOTOC; and
  - v) Reporting of dangerous goods incidents and occurrences.
- m) Competency cabin crew
  - i) Boarding Passengers;
  - ii) Perform emergency response; and
  - iii) Information to passengers.
- n) Competency security staff processing examination and x-ray examination of passengers, flight crew members, baggage, cargo and mail
  - i) Detecting undeclared / hidden Dangerous Goods; and
  - ii) Reporting of dangerous goods incidents and occurrences.

4.2.42 Personnel must be trained in the requirements commensurate with their responsibilities. Such training must include:

- a) general familiarization training — which must be aimed at providing familiarity with the general provisions;
- b) function-specific training — which must provide detailed training in the requirements applicable to the function for which that person is responsible; and
- c) safety training — which must cover the hazards presented by dangerous goods, safe handling and emergency response procedures.

4.2.23 Personnel identified in the categories specified in Table 1-4, 1-5 or 1-6 must be trained or training must be verified prior to the person performing any duty specified in Table 1-4, 1-5 or 1-6.

4.2.34 Recurrent training must be provided within 24 months of previous training to ensure knowledge is current. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the month on which the recurrent training was completed until 24 months from the expiry month of that previous training.

4.2.45 A test to verify understanding must be provided following training. Confirmation that the test has been completed satisfactorily is required.

4.2.56 A record of training must be maintained which must include:

- a) the individual's name;
- b) the most recent training completion month;
- c) a description, copy or reference to training materials used to meet the training requirements;
- d) the name and address of the organization providing the training; and
- e) evidence which shows that a test has been completed satisfactorily.

Training records must be retained by the employer for a minimum period of 36 months from the most recent training completion month and must be made available upon request to the employee or appropriate national authority.

4.2.67 The subject matter relating to dangerous goods transport with which various categories of personnel should be familiar is indicated in Table 1-4.

4.2.78 Staff of operators not carrying dangerous goods as cargo or mail must be trained commensurate with their responsibilities. The subject matter with which their various categories of staff should be familiar is indicated in Table 1-5.

*Note.— Security staff are required to be trained irrespective of whether the operator on which passengers or cargo are to be transported carries dangerous goods as cargo.*

### 4.3 INSTRUCTOR QUALIFICATIONS

#### 4.3.1 Educational skills

Educational skills (instructor qualifying examination) – appropriate national authority identifies the educational skills.

#### 4.3.2 Expert knowledge

- i) Knowledge of the work environment;
- ii) Competence according the corresponding modules; and
- iii) Valid certificate of the corresponding module.

#### 4.3.3 Multilevel instructor training

##### a) Instructor shipper (a) – valid for a - b

Successful participation of training for Shippers in all hazard classes and proceeding 2 trainings within 12 months – the training „Shipper of all classes“ should not be refreshed if the instructor participates a skill enhancement approved by appropriate national authority.

Expert knowledge in the section Shipper and Packer – the identification of the expertise skills is in the responsibility of the appropriate national authority.

A qualification exam is performed by appropriate national authority and must be successfully passed (80 % min).

##### b) Instructor forwarder (c) – valid for c – e

Successful participation of training for Forwarders in all hazard classes and proceeding 2 trainings within 12 months.

Expert knowledge in the section forwarder – appropriate national authority identifies the expertise skills.

A qualification exam is performed by appropriate national authority and must be successfully passed.

##### c) Instructor acceptance staff (f) – valid for f - n

Successful training of training for acceptance staff in all hazard classes and proceeding 2 trainings within 12 months – the training „acceptance staff of all classes“ should not be refreshed if the instructor participates a skill enhancement approved by appropriate national authority.

Expert knowledge in the section dangerous goods handling air traffic – appropriate national authority identifies the expertise skills.

A qualification exam is performed by appropriate national authority and must be successfully passed.



d) Instructor packer (b)

Successful training of training for Shippers in all hazard classes and proceeding 2 trainings of module packer within 12 months – the training „Shipper of all classes“ should not be refreshed if the instructor participates a skill enhancement approved by appropriate national authority.

Expert knowledge in the section Shipper and Packer – appropriate national authority identifies the expertise skills.

e) Instructor forwarder (d –e )

Successful training of training for forwarders in all hazard classes and proceeding 2 trainings of modules d or e within 12 months – the training „Shipper of all classes“ should not be refreshed if the instructor participates a skill enhancement approved by appropriate national authority.

Expert knowledge in the section air cargo forwarder – appropriate national authority identifies the expertise skills.

f) Instructor Operator (g – m) and security staff (n)

Successful training of training for acceptance staff in all hazard classes and proceeding 2 trainings of module g to n within 12 months – the training „acceptance staff of all classes“ should not be refreshed if the instructor participates a skill enhancement approved by appropriate national authority.

Expert knowledge in the section dangerous goods handling air traffic – appropriate national authority identifies the expertise skills.

g) Instructor of all modules (a – n)

Successful training of training for shipper, forwarders or acceptance staff in all hazard classes and proceeding 2 trainings of modules a or c or f within 12 months – the training „Shipper, Forwarder, acceptance staff of all classes“ should not be refreshed if the instructor participates a skill enhancement approved by appropriate national authority.

Expert knowledge in the applicated section – appropriate national authority identifies the expertise skills.

A qualification examination is performed by appropriate national authority and must be successfully passed.

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Training requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5 min / 2 min
Instructions regarding lithium batteries acc. Part II	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>				<input checked="" type="radio"/>						5 min / 2 min
Dangerous Goods Security	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>						<input type="radio"/>	5 min / 2 min
Reporting of incidents and accidents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5 min / 2 min
<b>2 – Limitations</b>															<b>100 min</b>
Introduction	<input checked="" type="radio"/>		<input checked="" type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	20 min / 5 min
Forbidden Dangerous Goods	<input checked="" type="radio"/>		<input checked="" type="radio"/>		<input checked="" type="radio"/>	<input checked="" type="radio"/>			<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	10 min / 5 min
Hidden Dangerous Goods	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	10 min / 5 min
Provisions concerning passenger and crew	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	45 min / 5 min
Transport of dangerous goods by post	<input checked="" type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>				<input type="radio"/>		<input type="radio"/>	10 min / 5 min















Introduction	●	●	●		○	●		○	○	○	○	○	○	○	○	15 min / 5 min
Marking	●	●	●	○	○	●	○	○	●	○		○	○	○		15 min / 5 min
Labelling	●	●	●	○	○	●	○	○	●	○		○	○	○		15 min / 5 min
Label specifications	●	●	●	○	○	●	○	○	○	○		○	○	○		15 min / 5 min
Handling label specifications	●	●	●	○	○	●	○	○	○	○	●	●	○	○		15 min / 5 min
<b>8 – Documentation</b>																<b>120 min</b>
Introduction	●	○	●		○	●		○	○	○	○	○	○	○	○	30 min / 5 min
Shipper’s declaration for dangerous goods	●	○	●	○	○	●	○	○		○	○	○		○		30 min / 5 min
Air waybill	●	○	●	○	○	●	○	○		○	○	○		○		30 min / 5 min
Additional documents	●		●	○	○	●	○							○		30 min / 5 min
<b>9 - Operation</b>																<b>170 min</b>
Introduction						●		○		○	○	○	○			20 min / 5 min
Acceptance				○	○	●	○	○		○	○	○				20 min / 5 min

Storage and segregation					○	○		○							20 min / 5 min
Loading and securing	● Secre- gation	● Secre- gation	● Secre- gation		● Secre- gation	● Secre- gation		●		●	○	●			20 min / 5 min
Inspection and decontamination						○		●		○	○	○			10 min / 5 min
Provisions of information						○		○	●	●	●	●	○		20 min / 5 min
Emergency response information	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10 min
Reporting to authorities			●	○	○	●	○	○	○	○	○	○	○	●	20 min / 5 min
Retention of documents						●				○	○	○			5 min
Helicopter Operations						●		●		●	●	●			20 min / 5 min
<b>10 - Radioactive Material</b>															<b>330 min</b>
Transport of radioactive material	●	○	○			○		○		○		○			30 min / 5 min
Scope and applicability	●	○	○			○									30 min / 5 min
Limitations	●	○	●			●		○				○			30 min / 5 min





<b>written exam - minimum demand</b>	180 min	60 min	120 min	60 min	60 min	180 min	60 min	60 min	60 min	60 min	60 min	60 min	60 min	60 min	
	May depending on whether the responsibilities match the corresponding job profiles														
●	intensive														
○	general basics														
●/○	time factor intensive/time factor general knowledge														

Competency	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Introduction	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1	36	21	33	14	18	39	16	16	23	5	5	5	12	14
2	90	20	80	15	50	80	15	50	100	95	70	95	85	80
3	130	30	30	30	30	60	30	30	30	30	30	30	30	30
4	75	20	60	10	10	75	10	5	20	20	20	20	5	5
5	315	315	85	15	15	85	15	15	0	0	0	0	15	15
6	135	45	25	5	5	40	5	5	5	5	5	5	0	5
7	75	75	75	20	25	75	20	25	20	35	5	35	25	25
8	120	15	120	15	20	120	15	15	45	15	15	15	5	20
9	30	30	50	20	45	110	20	75	15	75	60	75	25	30
10	330	90	125	0	0	130	0	80	25	60	5	60	0	0
A	15	0	15	0	0	15	0	0	0	0	0	0	0	0
B	25	2	22	5	5	25	5	5	10	12	0	15	5	2
C	10	4	0	0	0	10	0	0	0	0	0	0	0	0
	1396	677	730	159	233	874	161	331	303	362	225	365	217	236
UE	31	15	16	4	5	19	4	7	7	8	5	8	5	5
Days 8 UE	3,9	1,9	2,0	0,4	0,6	2,4	0,4	0,9	0,8	1,0	0,6	1,0	0,6	0,7
Days 7 UE	4,4	2,1	2,3	0,5	0,7	2,8	0,5	1,1	1,0	1,1	0,7	1,2	0,7	0,7
Exam UE	4	2	3	1	1	4	1	1	1	1	1	1	1	1
UE incl. Exam	35	17	19	5	6	23	5	8	8	9	6	9	6	6
Days 8 UE	4,4	2,1	2,4	0,6	0,8	2,9	0,6	1,0	1,0	1,1	0,8	1,1	0,7	0,8
Days 7 UE	5,0	2,4	2,7	0,6	0,9	3,3	0,7	1,2	1,1	1,3	0,9	1,3	0,8	0,9
Days	5	3	3	0,5	1	4	0,5	1	1	1	1	1	1	1
UE = training unit of 45 min														