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ID8000 Cargo Handling

Legend:		
IATA: ICAO: DGR: CAT: UN: ID:	International Air Transportation Association International Civil Aviation Organization Dangerous Goods Regulations Catergory United Nation Identification	

PREFACE

This guideline for ID8000 cargo handling is prepared according to IATA DGR Edition 62, however it doesn't overwirte any IATA procedures. Please always refer to the latest edition of DGR Book for details and clarifications. IATA DGR book contents are quoted for information sharing purpose only.

Note: each year IATA publishs a DGR book with new edition:

2021 Edition 62 2022 Edition 63 2023 Edition 64 Etc...





According to ICAO and IATA regulations, all persons work at the Dangerous Goods/Hazardous Materials transportation field must be trained. Below Table 1.5A from IATA DGR specifies minimum requirements for training curricula.

		pers ackers	Freigl	ht forwa	arders	Opera	ators a	nd grou	und har	ndling a	gents	Security screeners
Aspects of transport of dangerous goods by air with	Category											
which they should be familiar, as a minimum	1	2	3	4	5	6	7	8	9	10	11	12
General philosophy	X	X	х	х	х	х	х	х	X	X	х	х
Limitations	X		х	Х	X	х	х	х	X	X	х	X
General requirements for shippers	X		Х			Х						
Classification	X	X	Х			х						х
List of dangerous goods	X	Х	Х			Х				X		
General packing requirements	X	Х	Х			х						
Packing instructions	Х	Х	Х			Х						
Labelling and marking	X	Х	Х	Х	х	Х	х	Х	Х	Х	х	х
Shipper's Declaration and other relevant documentation	X		х	X		X	X					
Acceptance procedures						Х						
Recognition of undeclared dangerous goods	X	X	X	Х	Х	Х	Х	Х	Х	X	х	Х
Storage and loading procedures					X	X		Х		X		
Pilots' notification						X		Х		X		
Provisions for passengers and crew	X	X	X	Х	х	Х	Х	х	х	X	Х	Х
Emergency procedures	X	X	X	X	X	Х	X	Х	X	X	Х	X

TABLE 1.5.A Minimum Requirements for Training Curricula (1.5.2)

CATEGORY

- Shippers and persons undertaking the responsibilities of shippers', including operator's staff acting as shippers, operator's staff preparing dangerous goods as Company Materials (COMAT)
- 2. Packers
- 3. Staff of freight forwarders involved in processing dangerous goods
- 4. Staff of freight forwarders involved in processing cargo or mail (other than dangerous goods)
- 5. Staff of freight forwarders involved in the handling, storage and loading of cargo or mail
- 6. Operator's and ground handling agent's staff accepting dangerous goods
- 7. Operator's and ground handling agent's staff accepting cargo or mail (other than dangerous goods)
- 8. Operator's and ground handling agent's staff involved in the handling, storage and loading of cargo or mail and baggage
- 9. Passenger handling staff
- 10. Flight crew members, loadmasters, load planners and flight operations officers/flight dispatchers
- 11. Crew members (other than flight crew members)
- △ 12. Security staff who deal with the screening of passengers and crew and their baggage and cargo or mail, e.g. security screeners, their supervisors and staff involved in implementing security procedures.

GTA GSM staff involved in Dangerous Goods handling are DGR CAT 3 or CAT 6 qualified. GTA GSM customers and vendors should have appropriate qualification when they are involved in Dangerous Goods handling, and take their own risk in case of any non-compliance.

Below steps are a summary of ID8000 shipment handling, according to author's best knowledge and experience. However this does NOT replace any ICAO/IATA or Transport Canada rules and regulations. <u>The only proper way to handle</u> <u>Dangerous Goods is to strictly follow TDG requriement by referring to the latest edition of IATA DGR mannual.</u>



Goods packing requirements

This is shipper's full responsibility to comply packing requirement of Packing Instruction Y963 as below quoting from the DGR mannual.

PACKING INSTRUCTION Y963

OPERATOR VARIATIONS: AM-09, GF-04, MH-14, OU-04, SW-02, WY-04, XQ-01

This instruction applies to ID 8000, Consumer commodities on passenger aircraft and Cargo Aircraft Only.

Consumer commodities are materials that are packaged and distributed in a form intended or suitable for retail sale for purposes of personal care or household use. These include items administered or sold to patients by doctors or medical administrations.

Consumer commodities may only include substances of Class 2 (non-toxic aerosols only), Class 3 (Packing Group II or III), Division 6.1 (Packing Group III only), UN 3077, UN 3082, UN 3175, UN 3334 and UN 3335, provided such substances do not have a subsidiary hazard. Dangerous goods that are forbidden for transport aboard passenger aircraft must not be transported as consumer commodities.

Other dangerous goods not classified as ID 8000 must not be packed in the same outer packaging with ID 8000.

Except as otherwise provided below, dangerous goods packed in accordance with this packing instruction do not need to comply with Subsection 5.0, except 5.0.1.5 or Section 6 of these Regulations; they must, however, comply with all other applicable requirements:

- (a) each packaging must be designed and constructed to prevent leakage that may be caused by changes in altitude and temperature during air transport;
- (b) inner packagings that are breakable (such as earthenware, glass or brittle plastic) must be packed to prevent breakage and leakage under conditions normally incident to transport;



IATA Dangerous Goods Regulations

PACKING INSTRUCTION Y963 (continued)

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(c) each package offered for transport must be capable of withstanding a 1.2 m drop on solid concrete in the position most likely to cause damage. The criteria for passing the test is that the outer packaging must not exhibit any damage liable to affect safety during transport and there must be no leakage from the inner packaging(s). Each package offered for transport must be capable of withstanding, without breakage or leakage of any inner packaging and without significant reduction of effectiveness, a force applied to the top surface for a duration of 24 hours equivalent to the total weight of identical packages if stacked to a height of 3 m (including the test sample);

(d) when filling receptacles for liquids, sufficient ullage (outage) must be left to ensure that neither leakage nor permanent distortion of the receptacle will occur as a result of an expansion of the liquid caused by temperatures likely to prevail during transport. Unless specific requirements are prescribed in national rules or international agreements, liquids must not completely fill a receptacle at a temperature of 55°C. At this temperature a minimum ullage of 2% should be left. The primary packaging (which may include composite packaging), for which retention of the liquid is a basic function, must be capable of withstanding without leakage, an internal pressure which produces a pressure differential of not less than 75 kPa (0.75 bar) or a pressure related to the vapour pressure must be determined by the method shown in 5.0.2.9. Tests on sample receptacles must be carried out to demonstrate the capability of the primary packaging to withstand the above pressure;

(e) stoppers, corks or other such friction-type closures must be held securely, tightly and effectively in place by positive means. The closure device must be so designed that it is extremely improbable that it can be incorrectly or incompletely closed and must be such that it may be easily checked to determine that it is completely closed;

f) inner packagings must be tightly packed in strong outer packagings and must be so packed, secured or cushioned as to prevent any breakage, puncture or leakage of the contents into the outer packaging(s) during normal conditions of transport. Absorbent material must be provided for glass or earthenware inner packaging(s) containing consumer commodities in Class 3 or liquids of Division 6.1, in sufficient quantity to absorb the liquid contents of the largest of such inner packagings contained in the outer packagings. Absorbent and cushioning material must not react dangerously with the contents of the inner packagings. Notwithstanding the above, absorbent material may not be required if the inner packaging series or protected that breakage of the inner packagings and leakage of their contents from the outer packaging will not occur during normal conditions of transport;

(g) packagings (including closures) in direct contact with dangerous goods must be resistant to any chemical or other action of such goods. The materials of the receptacles must not contain substances which may react dangerously with the contents, form hazardous products or significantly weaken the receptacles;

- (h) Class 2 substances must be further limited to aerosol products containing non-toxic compressed or liquefied gas(es) that are necessary to expel liquids, powders or pastes, packed in inner non-refillable non-metal receptacles not exceeding 120 mL capacity each, or in inner non-refillable metal receptacles not exceeding 820 mL capacity each (except that flammable aerosols must not exceed 500 mL capacity each), subject, in either case, to the following provisions:
 - 1. the pressure in the aerosol must not exceed 1,500 kPa at 55°C (15.0 bar) and each receptacle must be capable of withstanding without bursting a pressure of at least 1.5 times the equilibrium pressure of the contents at 55°C;
 - if the pressure in the aerosol exceeds 970 kPa at 55°C (9.7 bar) but does not exceed 1,105 kPa at 55°C (11.0 bar), a metal IP7, IP7A or IP7B must be used;
 - if the pressure in the aerosol exceeds 1,105 kPa at 55°C (11.05 bar) but does not exceed 1,245 kPa at 55°C (12.45 bar), a metal IP7A or IP7B must be used;
 - 4. if the pressure in the aerosol exceeds 1,245 kPa at 55°C (12.45 bar), a metal IP7B must be used;
 - 5. IP7B metal receptacles having a minimum burst pressure of 1,800 kPa may be equipped with an inner capsule charged with a non-flammable, non-toxic compressed gas to provide the propellant function. In this case, the pressure indicated in 1, 2, 3 or 4 do not apply to the pressure within the capsule. The quantity of gas contained in the capsule must be so limited that the minimum burst pressure of the receptacle would not be exceeded if the entire gas content of the capsule were released into an aerosol;
 - 6. the liquid content must not completely fill the closed receptacle at 55°C;
 - each aerosol exceeding 120 mL capacity must have been heated until the pressure in the aerosol is equivalent to the equilibrium pressure of the contents at 55°C without evidence of leakage, distortion or other defect;
- 8. the valves must be protected by a cap or other suitable means during transport to prevent accidental activation.
- (i) for aerosols containing a biological or medical preparation which will be deteriorated by a heat test and which are non-toxic and non-flammable, packed in inner non-refillable receptacles not exceeding 575 mL capacity each, the following provisions are applicable:
 - 1. the pressure in the aerosol must not exceed 970 kPa at 55°C (9.7 bar);
 - 2. the liquid contents must not completely fill the closed receptacle at 55°C;



PACH	(ING INSTRUCTION Y963 (continued)
3.	one aerosol out of each lot of 500 or less, must be heated until the pressure in the aerosol is equilibrium pressure of the contents at 55°C without evidence of leakage, distortion or other defect
4.	and the protocica by a cap of other suitable means during there is the
	end and packagings must not exceed:
1.	500 mL for liquids; and 500 g for solids.
(k) the g	pross weight on the Shipper's Declaration for Dangerous Goods must be shown as:
2.	for one package, the actual gross weight of the package; for more than one package, either the actual gross weight of each package or as the average packages. For example, if there are 10 packages and the total gross weight of them is 100 kg Declaration for Dangerous Goods may show this as "average gross weight per package 10 kgG".
positi and Figur	packagings containing liquid dangerous goods must be packed with their closures upward a ion of the package must be indicated by either the "Package Orientation" (This Way Up) labels (se Figure 7.4.E) or pre-printed package orientation labels meeting the same specifications as F e 7.4.E (ISO Standard 780:1997). Orientation arrows are not required on outer packagings agings containing:
u	angerous goods in inner packagings each containing 120 mL or less with sufficient absorbent ma ne inner and outer packagings to completely absorb the liquid contents; or
• d	angerous goods in gas tight inner packagings such as tubes, bags or vials which are opened uncturing. Each inner packaging must not contain more than 500 mL.
(m) each o	completed package as prepared for shipment must not exceed a gross weight of 30 kg;
a sing	mer commodities shipped according to these provisions may be shipped in a unit load device whe le shipper provided they contain no other dangerous goods other than UN 1845, Carbon dioxide as a refrigerant. When the unit load device contains dry ice, the provisions of these Regulation

Note: Maximum Gross Weight of each package can't exceed 30kg.

1	8000	Consumer commodity †	9	Miscellaneous	E0	Y963	30 kg G	Y963	30 kg G
		Containers, empty or re-used, not containing dangerous	-			Not R	l estricted	Not R	estricted



Marking of each package

Below marking must be on one surface of each package:

1. Proper Shipping Name Consumer Commodity

2. UN/ID number ID8000

- 3. Name and Address of Shipper
- 4. Name and Address of Consignee



Labelling of each package

Below two label and mark must be affixed to each package:



(Hazard Label. Note: this label includes Proper Shipping Name and UN/ID Number already)



(Limited Quantities Mark)

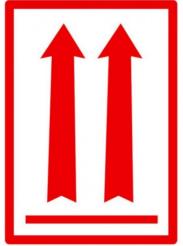


Note: Above label and mark MUST be affixed on the same surface of Proper Shipping Name and UN/ID Number. Above label and mark SHOULD be affixed adjacent to Shipper's and Consignee's Name and Address.

Note: source of above label and mark could be <u>https://www.uline.ca/BL_1382/Limited-Quantity-Labels?keywords=Limited+Quantity+Labels</u>

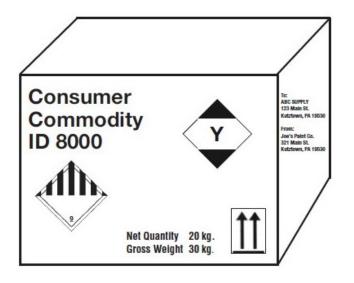
https://www.uline.ca/Product/AdvSearchResult?KeywordTyped=id&keywords=id8000

Below Upright Loading label is optional, subject to commodity property



It's regardless color of the label.

After above three steps, an ID8000 package should look like below:



Note: the "Net Quantity" and "Gross Weight" marks above are NOT mandatory.



Apply Overpack

For handling purpose, if multiple packages need to be packed together for convenience of transportation, Overpack applies.

Labeling of Overpack skid requirement:

Scenario One: If all labels of individual package are visible, only an "Overpack" mark is requried.

Or

Scenario Two: If any label of individual package is not visible, all labels MUST be reproduced outside the overpack skid, and "Overpack" mark is required.

Below is an example of Scenario One, all labels are visible:





Below is an example of Scenario Two, if any label of individual package is not visible, all labels MUST be reproduced outside the overpack skid.



"Overpack" label must be affixed to overpack skid:



https://www.uline.ca/Product/Detail/S-10798/TDG-Labels-and-Placards/Air-Labels-Overpack-2-1-2-x-6?pricode=YE688&gadtype=pla&id=S-10798&gclid=Cj0KCQjwlN32BRCCARIsADZ-J4tAow19VX9msGYtJdQnR0L8m7o3kHYGzGuQcilfUA1csz_JrKBmDxQaAuuTEALw_wcB&gclsrc=aw .ds

Such label can be found from above source. It's regardless color of the label.

If more than one skid is overpack, then each overpack has to be named properly as Overpack 01, Overpack 02, etc.



Step 5 DGD Preparation Note: GSM Team can prepare DGD with shipper's authorization

Below is a sample of DGD of ID8000:



549 S. DA	LONDON NWSON ST , WA 98108 STATES		Air Waybill No. Page 1 of 1 Pages Shipper's Reference Number (optional) P.O. INR000147				
C/O MYS D-108, OI	e A COSMETICS PRIVATE TIQUE LOGISTICS KHLA PH-1 .HI 110020	LTD					
Two cample to the open	eted and signed copies of this ator.	s Declaration mus	t be handed	WARNING			
TRANSPO This shipm	ORT DETAILS ent is within the limitations for: (delete non-applicable) NGER IRGO	Airport of Dep	Failure to comply in all respects with the Goods Regulations may be in breach subject to legal penalties				
Airport of	Destination:			Shipment Type: (delete non-applicable	9		
NATUDE	AND QUANTITY OF DAN		DC	NON-RADIOACTIVE			
NATURE	Dangerous Goods Identi		03				
UN or ID No.	Proper Shipping Name	Class or	Packing Group	Quantity and Type of Packing	Packing Ins		
ID8000	Consumer Commodity			29 fibreboard boxes x 12 kg G	Y963		
ID8000	Consumer commodity	9		4 fibreboard boxes x 14 kg G	Y963		

Additional Handling Information IATA

24 Hour Emergency Contact: Chemtrec, contract # CCN628151 24 Hour Emergency Telephone: +1 70



MAWB Preparation

GTA GSM is responsible for MAWB preparation for all airfreight shipments. Below is an example of part of MAWB with ID8000 cargo:

Airport of Destination			Requested Flight	/Date Amount	of Insurance	INSURANCE - If certier offers insurance, and such insurance is requested in accordance with the conditions thereof, indicate amou to be insured in figures in box marked "Amount of insurance".				
	information gerous Go	ods as per	attached Sh	nipper's Decla	ration	2	SCI			
	h		Chargeable	Rate /	Total		Juantity of Goods			
No. of Pieces RCP	Gross Weight	Commodity Item No.	Weight	Charge		find. Canana	lions of Volume)			

Step 7

Use IATA Checklist for acceptance check

DG acceptance check is the responsibile of carrier or its GHA staff. IATA publishs checklists to support the industry for checks. It's optional for shipper or freight forwarders to use the checklist, and it's helpful to use it for self-assessment.



The checklist can be downloaded from below link free for charges:

https://www.iata.org/contentassets/b08040a138dc4442a4f066e6fb99fe2a/en_form_n onrad.pdf



2021

DANGEROUS GOODS CHECKLIST FOR A NON-RADIOACTIVE SHIPMENT

The recommended checklist appearing on the following pages is intended to verify shipments at origin. Never accept or refuse a shipment before all items have been checked.

Is the following information correct for each entry?

SHIPPER'S DECLARATION FOR DANGEROUS GOODS (DGD)

Air V	Vay	bill No.:		Origin:		Destination:			
1.						ertification statement. This question	YES	NO*	N/A
2	ele	ectronica	lly [8.0.2.1, 8.1.1, 8.1.2, 8	.1.6.12]		's Declaration data is submitted			
						not applicable "N/A" only when the			
						not approache thirt enig inter the			
5.						2, 8.1.6.5]			
6.	lf f	ull name	of Airport or City of Depa	arture or	Destination is not sl	hown, enter it. [8.1.6.6 and 8.1.6.7]			
7.	Th	e word '	Radioactive" deleted or n	ot shown	[8.1.2.5.2, 8.1.6.8]				
Ident							_	_	
						ntries with * [8.1.6.9.1, Step 2]			
						5.9.1, Step 3]			_
						livision [8.1.6.9.1, Step 4]			
12.	Pa	cking G	roup [8.1.6.9.1, Step 5]						
Quan	tity	and Ty	pe of Packing				-	-	
	lim	nit [8.1.6.	9.2, Step 6]			applicable) within per package			
15.						e net explosive mass followed by unit			
16.	Wi		rent dangerous goods are	e packed	in one outer packa	ging, the following rules are complied			
16.1	-	Compa	tible according to Table 9	.3.A					
16.2	-	Condit	ons met for UN packages	s contain	ng Division 6.2 [5.0	.2.11(c)]			
16.3	-	Wordin	g "All packed in one (type	e of pack	aging)" [8.1.6.9.2, S	itep 6(f)]			
16.4		Calcula	ation of "Q" value which m	nust not e	exceed 1 [5.0.2.11 (g) & (h); 2.7.5.6; 8.1.6.9.2, Step 6(g)]			
17.1	-	Compa	tible according to Table 9	.3.A					
17.2	-	Wordin	g "Overpack Used" [8.1.6	.9.2, Ste	p 7]				
17.3	-					n and total quantity of dangerous			
Pack	ing	Instruc	tions					_	
18.	Pa	cking In	struction Number [8.1.6.9.	.3, Step	8]				
19.	Fo	r lithium	batteries in compliance w	with Secti	on IB, "IB" follows th	he packing instruction [8.1.6.9.3,	-		
Auth	oriz	ations							
20.						mber A1, A2, A4, A5, A51, A81, A88, [8.1.6.9.4, Step 9]			
21.						a copy in English and additional			
Addit			lling Information						
22.	or	ganic pe	roxides of Division 5.2, or	samples	thereof, PBE, infec	ed substances of Division 4.1 and ctious and controlled substances, 1.6.11]			
23.	Na	me of S	ignatory and Date indica	ated and	Signature of				
24.	Ar	nendme	nt or alteration signed by	Shipper	[8.1.2.6]				
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1223		YES	NO*	N/A
	VAYBILL-HANDLING INFORMATION			
25.	The statement: "Dangerous goods as per associated Shipper's Declaration" or "Dangerous Goods as per associated DGD" [8.2.1(a)]			_
26.	"Cargo Aircraft Only" or "CAO", if applicable [8.2.1(b)]			
27.	Where non-dangerous goods are included, the number of pieces of dangerous goods shown [8.2.2]			
PAC	(AGE(S) AND OVERPACKS		_	
28.	Packaging free from damage and leakage [9.1.3 (i)]			
29.	Packaging conforms with packing instruction			
30.	Same number and type of packagings and overpacks delivered as shown on DGD [9.1.3]			
Mark	5			
31.	UN Specification Packaging, marked according to 6.0.4 and 6.0.5:	100	0.0	-
31.1	- Symbol and Specification Code [6.0.4.2.1 (a), (b)]			
31.2	- X, Y or Z meets or exceeds Packing Group/Packing Instruction requirements [6.0.4.2.1 (c)]			
31.3	- Gross Weight within limits (Solids, Inner Packagings or IBCs [SP A179, 6.0.4.2.1 (d)]			
31.4	- Plastic drums, jerricans and IBCs within permitted period of use [5.0.2.15]			
31.5	 Infectious substance package mark [6.5.3.1] 			
32.	UN or ID number(s), preceded by prefix [7.1.4.1(a)]			
33.	The Proper Shipping Name(s) including technical name where required [7.1.4.1(a)]			
34.	The full name and address of Shipper and Consignee [7.1.4.1(b)]			
	For consignments of more than one package of all classes (except ID 8000 and Class 7) the net			
	quantity, or gross weight followed by "G", as applicable, unless contents are identical, marked on the packages [7.1.4.1(c)]			
36.	Carbon Dioxide, Solid (Dry Ice), the net weight marked on the packages [7.1.4.1(d)]			
37.	The Name and Telephone Number of a responsible person for Division 6.2 Infectious Substances shipment [7.1.4.1(e)].			
38.	The Special Marking requirements shown for Packing Instruction 202 [7.1.4.1(f)]			
	Limited Quantities mark [7.1.4.2]			
40.	Environmentally Hazardous Substance mark [7.1.5.3]			
41.	Lithium Battery mark [7.1.5.5]			
Labe	lling			
42.	The label(s) identifying the Primary hazard as per 4.2, Column D properly affixed [7.2.3.1; 7.2.6]			
43.	The label(s) identifying the Subsidiary hazard, as per 4.2, Column D properly affixed [7.2.3.1; 7.2.6.2.3]			
44.	"Cargo Aircraft Only" label [7.2.4.2; 7.2.6.3]			
45.	"Orientation" labels on two opposite sides, if applicable [7.2.4.4]			
46.	"Cryogenic Liquid" label, if applicable as per 4.2, Column D [7.2.4.3]			
47.	"Keep Away From Heat" label, if applicable as per 4.2, Column D [7.2.4.5]			
48.	Any irrelevant marks and labels removed or obliterated [7.1.1; 7.2.1]			
For C	lverpacks			
49.	Packaging use marks and hazard and handling labels, as required must be clearly visible or reproduced on the outside of the overpack [7.1.7.1, 7.1.7.2, 7.2.7]			
50.	The word "Overpack" marked if marks and labels are not visible on packages within the overpack [7.1.7.1].	_		
51.	If more than one overpack is used, identification marks shown and total quantity of dangerous goods [7.1.7.3]	-		
GENI		-	-	-
52.	State and Operator variations complied with [2.8]			
53.	Cargo Aircraft Only shipments, a cargo aircraft operates on all sectors			
Comr	nents:			
Chec	ked by			
Place	:Signature:			
Date:	Time:			
Duid.				

* IF ANY BOX IS CHECKED "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.

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Summary

The proper way to handle ID8000, or to handle Danagerous Goods, is to:

- Get proper training according to IATA Regulations
- Always refer to the latest edition of DGR book
- Follow the IATA check list when preparing or accepting DG shipments
- Use UN package and IATA approved labels and marks only when applicable
- Be concentrate and focus when preparing DG shipment documents and package, and do NOT rush