Separating DG in Transport and Storage

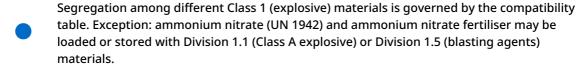
Understanding how to segregate DG items in storage or in transit is important. Knowing what and how to segregate is easier to track at the level of the hazard class instead of individual items. Please see the below table for a breakdown of segregation guidelines.

Class or Division	1.1, 1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3 Zone A	2.3 Zone B	3	4.1	4.2	4.3	5.1	5.2	6.1 Zone A	7	8
Explosives - 1.1 and 1.2	•					•	•	•			•							•
Explosives - 1.3	•					•		•	•			•				•		•
Explosives - 1.4																		
Very Insensitive Explosives - 1.5									•							•		
Extremely Insensitive Explosives - 1.6				•														
Flammable Gases - 2.1								•										
Non-Toxic, Non- Flammable gases - 2.2				•														
Toxic Gas Zone A - 2.3																		
Toxic Gas Zone B - 2.3																		
Flammable Liquids - 3																		
Flammable Solids - 4.1								•								•		
Spontaneously Combustible Materials - 4.2								•								•		
Substances which, in contact with water, emit flammable gases - 4.3								•										
Oxidizers - 5.1																		
Organic Peroxides - 5.2																		

Toxic Liquids PGI Zone A - 6.1	•	•	•			•	•	•	•	•		•
Radioactive Materials - 7												
Corrosive Liquids - 8					•			•			•	

May not be loaded, transported, or stored together in the same transport vehicle or
storage facility. Both main hazard risks and subsidiary risks need to be taken into account.

May not be loaded, transported, or stored together in the same transport vehicle or storage facility **unless separated** from each other by three meters or more. However, Class 8 (corrosive) liquids may not be loaded above or adjacent to Class 4 (flammable) or Class 5 (oxidising) materials except that the mixture of contents would not cause a fire or a dangerous evolution of heat or gas.



Blank The absence of any hazard class or division or a blank space in the table indicates that no restrictions apply.

Hazard Zone - A "hazard zone" means one of four levels of hazard assigned to gasses - Hazard Zones A through D. Hazard Zones A and B are assigned to liquids that are poisonous by inhalation. Consult manufacturer or packaging to identify hazard zones.

PGI - "Poisonous Gas".

Notes:

Common DG items in Humanitarian Action

Item	Common Issues	Example Item	Possible UN IDs
		Lithium ion	UN3480, UN3481
	Depending on battery type, may be banned or	Sealed lead acid	UN3028, UN2800, UN3090
	have limited capability to transport on commercial aircraft.	Refillable lead acid	UN2794, UN3171
Batteries	 Some battery types are refillable, and may leak harming handlers or reacting to nearby objects or substances. 	Lithium metal	UN3090, UN3091
	 Damaged or swollen batteries are forbidden in 		

air transport.

5.1 hazard label.

Item	Common Issues	Example Item	Possible UN IDs
Dialanias I	Heavily restricted on some forms of transport.	Blood/medical samples	UN3291
Biological Hazards	May require specialised documentation. Requires	Live infectious	UN2814,
iazaius	specialised storage.	substances	UN2900
		Medical waste	UN3291
	Some products that contain NaDCC as an active ingredient may count as DG if they contain a	HTH Calcium Hypochlorite	UN1748, UN2208, UN2880
	sufficiently large percentage, or are shipped in a sufficient size or sufficient quantities (Example:	NaDCC	UN2465
Water Purification	Aquatabs above 1.67 grams per tablet). Always check SDS from the manufacturer before shipping. • Keep away from products bearing the 4.3 hazard label.	Sodium Hypochlorite	UN1791
	 If packaging is compromised, may irritate or harm persons handling them. 	Alcohol bases hand sanitiser	UN1987
Cleaning Agents	 May react to objects and substances stored nearby, causing slow damage or violent energetic reactions. Shade and good ventilation is necessary. When a large quantity must be stored or stowed, if possible, separate in smaller storing quantities. Keep away from products bearing the class 3, division 4.2 hazard labels and in general from any flammable products. 	Chlorine based cleaning solutions	UN1017, UN1908
	Compressed gas cylinders are considered DG	Oxygen	UN1002, UN1702
	even when completely depressurised or empty	Fire extinguisher	UN1044
Compressed Gas	 when transported by air. Compressed gas cylinders may rupture, when stored for long periods of time, or in an unsafe manner. 	Propane	UN1978, UN1995
		Diesel/Gas oil	UN1202
		Gasoline/Petrol	UN1203
		Kerosene	UN1223
iquid Fuel	 Highly combustible depending on the type. Fuel is often inappropriately stored in a high temperature or unventilated rooms, or centrally located in a warehouse. 	Aviation Fuel/A-1 jet fuel	UN1863
	 Shade and good ventilation is necessary. Keep away from substances bearing the division 		

Item	Common Issues	Example Item	Possible UN IDs
			UN3166,
		Automobiles/Vehicle	UN3171,
			UN1202,
			UN2800
	Vehicles and generators can be considered DG	Engines	UN3528,
4	for air shipping because they contain fuel or		UN3529,
Mechanical	other potentially hazardous fluids, all of which		UN3530,
Equipment and Fluids	usually must be below a minimum level or		UN3166
	completely drained before transporting in an air	Generators	UN3166
	craft or sea shipping container.	Oxygen Generator	UN3356
		Freezers	UN2857,
		rieezeis	UN3159
		Antifreeze	UN3082
		Coolants	UN1202
Chemical Fertilizers	 May be highly explosive depending on chemical composition. Storage in high temperature, lowly ventilated areas, or near other reactive substances might cause serious harm. 	Multiple	
Building		Pesticides	Many
	Require proper declaration and documentation for most forms of transport, and is often highly	Sealants	Many
Related Materials	for most forms of transport, and is often highly regulated by air transport		UN1950,
nateriais	regulated by all transport	Paints	UN1263