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ADR - BASIC TERMS

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**Transport of Dangerous Goods - Modernization of Curricula and Development of
Trainings for Professionals in the Western Balkans HEIs / DGTRANS**

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- The concept of dangerous goods - represent substances that, due to their properties, can have a negative impact on human health and the environment
- Modern technological development is not possible without dangerous goods
- Their transportation occupies a significant place in relation to other cargoes (about 5% for the EU).
- In order to eliminate and reduce their impact, a preventive mechanism was developed



An accident situation



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CLASSIFICATION OF DANGEROUS GOODS

UN HAZARD CLASSES AND WARNING DIAMONDS					
CLASS 1			CLASS 2 – GASES		
Explosive substances and articles			Flammable gas	Non-flammable gas	Toxic gas
CLASS 3	CLASS 4.1	CLASS 4.2	CLASS 4.3	CLASS 5.1	CLASS 5.2
Flammable liquid	Flammable solid	Liable to spontaneous combustion	Flammable on contact with water	Oxidising agent	Organic peroxide
CLASS 6.1	CLASS 6.2	CLASS 7		CLASS 8	CLASS 9
Toxic	Infectious substance	Radioactive material		Corrosive	Miscellaneous

OVERALL 9 CLASSES



REGULATION IN FIELD OF TRANSPORT OF DANGEROUS GOODS

1. INTERNATIONAL:

- **ADR** - The Agreement concerning the International Carriage of Dangerous Goods by Road
 - **RID** - The Regulation concerning the International Carriage of Dangerous Goods by Rail
 - **ADN** - The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 - **IMDG-CODE** - The International Maritime Dangerous Goods Code
- ICAO-TI** – Technical Instructions For The Safe Transport of Dangerous Goods by Air

2. NATIONAL:

- The law on transportation of dangerous goods





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LIST OF DANGEROUS GOODS - TABLE A

- The basic instructions for use of ADR consist of table A, which contains a list of dangerous goods in numerical order according to UN numbers
- All materials are classified into 9 classes
- Each row of the table deals with a hazardous substance under a given UN number
- There are 20 columns in Table A and each is dedicated to a specific topic
- The field where the column and row intersect contains information related to a specific topic for a given subject



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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and excepted quantities		Packaging			Portable tanks and bulk containers	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9 % but not more than 87 % ethylene oxide	2	2F		2.1	662	0	E0	P200		MP9	(M) T50	
1043	FERTILIZER AMMONIATING SOLUTION with free ammonia	2	4A		2.2	642							
1044	FIRE EXTINGUISHERS with compressed or liquefied gas	2	6A		2.2	225 594	120 ml	E0	P003	PP91	MP9		

ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9 % but not more than 87 % ethylene oxide
			- (E)						1043	FERTILIZER AMMONIATING SOLUTION with free ammonia
			3 (E)			CV9			1044	FIRE EXTINGUISHERS with compressed or liquefied gas



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EXAMPLE OF DANGEROUS GOOD: **ELEVATED TEMPERATURE LIQUID, N.O.S.**

- **COLUMN (1) - UN NUMBER**

Every dangerous substance has its own UN number. It is the identification four-digit number of the substance by which it is recognizable in all forms of transport.

- **UN3257**

- **COLUMN (2) - NAME AND DESCRIPTION**

Contains the name of the substance written in capital letters. This name is used as the official shipping name. Descriptive text written in small letters, which is added after the official shipping name to clarify the area of application, is not part of the official name. In case the names are separated by the conjunction "or", only one part of the total name can be used as the official name.

- **ELEVATED TEMPERATURE LIQUID, N.O.S.**

- **COLUMN (3A) - CLASS**

It contains the number of the class in which the dangerous substance is classified according to the main danger that the substance possesses (classes 1-9).

9 - OTHER DANGEROUS GOODS

- **COLUMN (3B) - CLASSIFICATION CODE**

The properties of dangerous substances are represented by a combination of numerical and letter symbols. The classification code shows the detailed breakdown of hazardous substances within each class.

M9 - LIQUID SUBSTANCE IN HEATED STATE



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- COLUMN (4) - PACKING GROUP

It contains the packaging group in which the dangerous substance is classified and is marked with the Roman numerals I, II and III. Certain substances are not classified in any packaging group. Packaging group I indicates substances with a high level of danger, group II with a medium level and group III with a low level of danger.

- PG III

- COLUMN (5) - LABELS

It contains the sample number of the labels that should be placed on pieces, containers and vehicles with a given dangerous substance.

- 9

- COLUMN (6) - SPECIAL PROVISIONS

It contains numerical codes of special provisions that must be met for a specific hazardous substance. If this column is empty, no special provisions apply to the given dangerous goods.

- 274, 643 i 668

- COLUMN (7A) - Limited quantities

It contains the largest permitted quantities of matter for the transport of goods in limited quantities. In that case, part of the provisions relating to the transport of dangerous goods shall apply. For a dangerous substance for which transport in limited quantities is not allowed, the value "0" is indicated.

- 0



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- COLUMN (7B) - EXCEPTED QUANTITIES

It contains an alphanumeric code with the following meaning :

- “E0” means that there is no exemption from the provisions of ADR
- other alphanumeric codes starting with the letter "E" mean that the provisions of ADR do not apply if certain conditions are met

- EO

- COLUMN (8) - PACKING INSTRUCTIONS

Sadrži alfanumeričke kodove za primenu uputstava za pakovanje u ambalaži:

- Alphanumeric codes beginning with the letter “P” refer to packaging instructions in packaging and containers (except IBCs and large packagings), while codes beginning with the letter “R” refer to packaging instructions in thin sheet packaging. If this column does not contain any code starting with the letter "P" or "R", the given substance cannot be transported in packaging.
- Alphanumeric codes beginning with the letters “IBC” refer to IBC packing instructions. If this column does not contain any code beginning with the letters "IBC", the dangerous goods in question cannot be transported in IBC packaging.
- Alphanumeric codes beginning with the letters “LP” refer to instructions for packing in large packaging. If this column does not contain any codes starting with the letters "LP", the given dangerous substance cannot be transported in large packaging.

- PO99 i IBC99



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- COLUMN (9A) - SPECIAL PACKING PROVISIONS

Contains the alphanumeric codes of the applicable special packing provisions:

- "PP" or "RR" - special requirements for packing (except IBC and large packing)
- "B" or "BB" - special provisions for IBC
- "L" or "LL" - special provisions for packing in large packing

- **EMPTY COLUMN**

- COLUMN (9B) - MIXED PACKING PROVISIONS

Sadrži alfanumeričke kodove koji počinju slovima "MP".

- **PRAZNA KOLONA**

- KOLONA (10) - UPUTSTVO ZA PRENOSIVE CISTERNE I KONTEJNERE ZA ROBU U RASUTOM STANJU

Sadrži alfanumerički kod koji je dodeljen uputstvu za prenosive cisterne. Ako nije naveden kod, transport u prenosivim cisternama nije dozvoljen, izuzev ako nadležni organ nije izdao dozvolu.

- **T3**

- COLUMN (11) - SPECIAL PROVISIONS FOR PORTABLE TANKS AND CONTAINERS FOR BULK GOODS

- **TP3 I TP29**



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- COLUMN (12) - CODES ZA ADR TANKS

Contains a single alphanumeric code that describes a specific type of tank for Class 2 gases or Class 3 to 9 substances. This code corresponds to the least stringent provisions. If no code is given, transport in tanks is not allowed.

- LGAV

- COLUMN (13) - SPECIAL PROVISIONS FOR ADR TANKS

It contains alphanumeric codes for special provisions for ADR tanks, which must be filled in additionally.

- TC7, TU35, TE6, TE14, TE18 I TE24

- COLUMN (14) - VEHICLE FOR TANK CARRIAGE

It contains the letter code for vehicles used to transport substances in tanks. Vehicles for transport in tanks are marked FL and AT.

- AT

- COLUMN (15) - TRANSPORT CATEGORY AND RESTRICTION CODE FOR TUNNELS

It shows us through which categories of tunnels a vehicle transporting a certain dangerous goods is allowed to pass through

- 3

- (D)



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- COLUMN (16) - SPECIAL PROVISIONS FOR CARRIAGE IN PACKAGES

Contains alphanumeric codes starting with the letter "V". In the event that no code is specified, it means that the general provisions relating to transport in packages apply.

- **EMPTY COLUMN**
- COLUMN (17) - SPECIAL PROVISIONS FOR CARRIAGE BULK
- **VC3**
- COLUMN (18) - SPECIAL PROVISIONS FOR LOADING, UNLOADING AND HANDLING
- **EMPTY COLUMN**
- COLUMN (19) - SPECIAL PROVISIONS FOR TRANSPORT OPERATIONS
- **EMPTY COLUMN**
- COLUMN (20) - HAZARD IDENTIFICATION NUMBER

It contains a number of two or three digits (in certain cases they are preceded by the letter "X") for substances and objects of class 2 to 9. In prescribed cases, this number must be indicated in the upper part of the orange board.

99 - oder heated dangerous goods



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**Thank you for
your attention**

