

# Transportation of Dangerous Goods (TDG) On-The-Job Training

Part 1. E-Learning (Initial Orientation & Awareness)



Part 2. On-The-Job Training

Part 3. Competency Evaluation / Proficiency Evaluation

## Overview

On-The-Job Training is typically the 2<sup>nd</sup> Part of your comprehensive TDG Training program and involves working closely with your on-site TDG Instructor.

You can expect TDG 'On-The-Job Training' to take a minimum of 3 hours to complete and may be conducted over several days.

Your instructor will cover every aspect of Transportation of Dangerous Goods and will use a variety of actions to teach each applicable point. Actions may include: 1. Explanations of processes and equipment used by your instructor, 2. Demonstrations by your instructor, 3. Questions to verify you understand the content or processes, and 4. Practical skill demonstrations by you, the trainee.

It is your responsibility to learn the skills and ask questions when you don't understand. Don't worry, your instructor will provide you with sufficient practice time until you are competent in the handling, offering for transport and/or transporting of dangerous goods at your site, in a safe manner.



## Basic Information

Trainee		Training Location(s)	
Instructor(s)			
Start Date			

## OTJ &gt; Company / Instructor Notes

The following 'On-The-Job' Training checklist was developed to assist instructors in providing learners with the necessary skills and concepts in the handling, offering for transport and/or transporting of dangerous goods. The performance categories and learning objectives/content outlined are designed to cover every aspect of the TDG training requirements as indicated by Transport Canada. Personal responsibility, and problem-solving skills must be emphasized wherever possible.

Part of the training process involves increasing the trainee's confidence. Trainees should be given practice time sufficient to demonstrate the skill(s) necessary to proceed to the next stage.

For consistent evaluation of learner development/skill each of the teaching points (including all subheadings), where applicable must be fully covered in order for the training to be considered complete. In cases where the primary heading is not applicable (n/a), all subheadings will be 'not applicable'. The following letter designations (E, D, Q and P) denote the appropriate action to be taken with each teaching point. One or more may be required for each teaching point.

Action(s)	Description
E	Explanation of process/equipment by instructor.
D	Demonstration by instructor.
Q	Question to confirm understanding of content or process.
P	Practical skill performed by trainee.

Practical training will include hands-on demonstrations by the instructor or another competent employee and exercises by the trainee.

**Note:** Competency of any person authorized to deliver TDG training to employees must be determined by the employer. This competency may include, but is not limited to, the following criteria:

- successful completion of the site's TDG training program (90% score overall with demonstrated competency),
- knowledge and experience sufficient to explain and safely demonstrate all of the required training elements of this program,
- sufficient verbal and written communication skills, and
- strong interpersonal abilities to enable effective course delivery.

## OTJ Training Checklist

Instructor Training Content/Criteria		Complete	
Action(s)	Introduction	✓	N/A
E	Review process used to determine competency		
E	Define Dangerous Good (i.e. <i>Materials or items with hazardous properties which, if not properly controlled, present a potential hazard to human health &amp; safety, infrastructure and/ or their means of transport.</i> )		
EQ	Review reasons for implementing DG system (provide examples of catastrophes, etc.)		
EQ	Ask trainee if there are any questions from the eLearning component		
Action(s)	Responsibilities	✓	N/A
E	Review worker responsibilities including:		
E	<ul style="list-style-type: none"> <li>understanding TDG requirements</li> </ul>		
E	<ul style="list-style-type: none"> <li>completing documents legibly, accurately and completely</li> </ul>		
E	<ul style="list-style-type: none"> <li>checking documents for accuracy and completeness</li> </ul>		
Action(s)	Classes of Dangerous Goods (DG) and Associated Hazards	✓	N/A
EQ	<p>Review nine classes, division, subclasses and packing groups of DG (review site specific examples, if available) &amp; associated hazards</p> <p>Class 1 Explosives (e.g. ammunition, primers, explosive charges)</p> <ul style="list-style-type: none"> <li>capable (by chemical reaction) of producing gases at temperatures, pressures and speeds as to cause catastrophic damage through force and/or of producing otherwise hazardous amounts of heat, light, sound, gas or smoke.</li> </ul> <p>Class 2 Gases (e.g. aerosols, compressed air, carbon dioxide, propane)</p> <ul style="list-style-type: none"> <li>flammability, potential as asphyxiates, ability to oxidize and/or toxicity and corrosiveness</li> </ul> <p>Class 3 Flammable Liquids (e.g. adhesives, alcohols, gasoline/petrol, diesel fuel, turpentine)</p> <ul style="list-style-type: none"> <li>volatility, combustibility and potential in causing/propagating severe conflagrations</li> </ul> <p>Class 4 Flammable Solids (e.g. sulphur, alkali metals, seed cake)</p> <ul style="list-style-type: none"> <li>volatility, combustibility and potential in causing/propagating severe conflagrations</li> </ul> <p>Class 5 Oxidizing Substances (e.g. hydrogen peroxide, lead nitrate, potassium/sodium chlorate)</p> <ul style="list-style-type: none"> <li>can yield oxygen and in so doing cause or contribute to combustion of other materials [organic peroxides are thermally unstable and may exude heat whilst undergoing exothermic autocatalytic decomposition, may be liable to explosive decomposition, burn rapidly, be sensitive to impact or friction, react dangerously with other substances or cause damage to eyes]</li> </ul> <p>Class 6 Toxic &amp; Infectious Substance s(e.g. alkaloids, acids, cresols)</p> <ul style="list-style-type: none"> <li>pose significant risks to human and animal health upon contact</li> </ul> <p>Class 7 Radioactive Material (e.g. radium radionuclides, enriched uranium, cesium 137)</p> <ul style="list-style-type: none"> <li>whilst undergoing radioactive decay, radionuclides emit ionizing radiation, which presents potentially severe risks to human health</li> </ul>		

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Instructor Training Content/Criteria				Complete	
	Class 8 Corrosives (e.g. acids/acid solutions, batteries, chlorides, formaldehyde) <ul style="list-style-type: none"> <li>by chemical action degrade or disintegrate other materials upon contact</li> </ul> Class 9 Miscellaneous DG (e.g. dry ice, first aid kits, ammonium nitrate fertilizers) <ul style="list-style-type: none"> <li>present a wide array of potential hazards to human health and safety, infrastructure and/ or their means of transport</li> </ul>				
EDQ	Identify DG handled, offered for transport and transported from the worksite - include: <ol style="list-style-type: none"> <li>shipping names, 2. classes, 3. UN numbers and 4. packing groups for the DG that are normally encountered on the job</li> </ol>				
	Shipping Name	UN Number	Class(es) / Subclass(es)	Packing Group	
	Aerosols	UN1950	Class 2.1 or Class 2.2	none	
	Adhesives	UN1133	Class 3	I, II, III	
	Propane	UN1978	Class 2.1	none	
Action(s)	Containers			✓	N/A
E	Discuss requirement to use only approved containers that adhere to design standards intended to survive normal conditions of transport				
EDQP	Review container selection method(s) and examine sample approved containers (tanks, cylinders, boxes, pails, drums, aerosols, etc.) used on site				
Action(s)	Safety Marks (sample from DG handled, offered for transport & transported from the worksite)			✓	N/A
ED	<b>Hazard Symbols</b> Review purpose (i.e. to indicate class and division of DG), shape (diamond) and location on DG				
EDQ	<b>Labels</b> Review labelling rules / location of safety marks				
EDQ	<b>Placards</b> Introduce placard symbols in use and review placard rules: <ul style="list-style-type: none"> <li>contents - i.e. labels with UN number</li> <li>visibility requirement</li> <li>removal of placards</li> </ul>				
EDQ	<b>Mixed Loads</b> Review requirements for mixed loads: <ul style="list-style-type: none"> <li>Segregation of incompatible DG, and</li> <li>'Danger' placard - if used</li> </ul>				
Action(s)	Shipping documents (use documents from DG handled, offered for transport & transported from the worksite)			✓	N/A
EDQP	Review a sample shipping document and identify required information - note: <ul style="list-style-type: none"> <li>1. date; 2. shipper name and address; 3. 24 hour emergency contact number; 4. description of goods in order (shipping name, class(es), UN number, packing group OR UN number, shipping name, class(es), packing group); 5. # of containers &amp; quantity; 6. other, as required</li> </ul>				

## OTJ Training Checklist

Instructor Training Content/Criteria		Complete	
	<ul style="list-style-type: none"> <li>Review requirement to update shipping documents to reflect changes in DG quantity</li> <li>Document storage requirements</li> </ul>		
EQ	Review rules for addressing inadequate or incorrect shipping documents, placards, labels, other safety marks or means of containment		
Action(s)	<b>Accidental Release / Reporting</b>	✓	N/A
EQ	Review site spill response/containment/reporting criteria		
EQ	Discuss emergency centre contact information and when reporting is required		
Action(s)	<b>Equipment</b>	✓	N/A
EDQP	Discuss material handling devices <ul style="list-style-type: none"> <li>Pumps, metres, measurement devices, etc. note: must meet intrinsic safety requirements for the class and division of the DG being moved)</li> </ul>		
EDQP	<ul style="list-style-type: none"> <li>Carts, lift trucks, etc. note: must be able to maintain proper orientation of containers including compressed gas cylinders</li> </ul>		
EDQP	Review cargo securement requirements		
Action(s)	<b>Emergency Response Plans</b>	✓	N/A
EQ	Review ERP development/approval requirements for DGs that require them (i.e. those specified in column 7 of Schedule I of the TDG Regulations)		
Action(s)	<b>Rules and Procedures</b>	✓	N/A
	Review Site Specific Rules and Procedures for workers handling, offering for transport and/or transporting dangerous goods		
	<ul style="list-style-type: none"> <li>PPE policy</li> </ul>		
	<ul style="list-style-type: none"> <li>Safe storage</li> </ul>		
	<ul style="list-style-type: none"> <li>Handling DG</li> <li>Other (specify) _____</li> </ul>		