PUBLIC COMPANY ORLEN LIETUVA

APPROVED BY:
Director of Quality, Labour Safety
and Environmental Control

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Order No TV1(1.2-1)-2024-0326

OCCUPATIONAL HEALTH AND SAFETY PROCEDURE BDS-41 SAFETY AND HEALTH SIGNS

I. GENERAL PROVISIONS

Purpose of Procedure

1. The purpose of the present Procedure is to establish minimum requirements for health and safety signs and their use at Public Company ORLEN Lietuva (hereinafter, the Company).

2. To establish the requirements for warning and protection of employees against potential hazards using safety and health signs at the Company.

Scope of Application

3. The requirements of this Procedure are binding to employees of the Company and contractors using safety and health signs.

4. This Procedure contains main examples of safety and health signs. In case of need, safety and health signs other than specified herein may be used.

5. The requirements established herein shall not apply to:

5.1. Marking/labeling of marketable hazardous substances and mixtures, products and equipment;

5.2. Road, railway, inland, seaborne and air traffic;

5.3. Marking of heat supply piping: requirements for marking of such piping are provided in Instructions for Operation of Heat Supply and Distribution Piping BTE-1.

II. REFERENCES

6. This Procedure shall apply in conjunction with the following legal acts and other documents, including the following as amended:

6.1. Regulations on the Use of Occupational Health and Safety Signs in the Workplace approved by the Minister of Social Security and Labor with Order No 95 of 24 November 1999;

6.2. Regulations on the Use of Fire Safety Signs in Companies, Institutions and Organizations approved by the Director of Fire and Rescue Department under the Ministry of the Interior with Order No 1-404 of 23 December 2005;

6.3. Rules for Installation of Road Signs and Vertical Road Marking approved by the Minister of Transport and Communications of the Republic of Lithuania with Order No 3-83 of 31 January 2012;

6.4. LST ISO 3864–1:2011 Graphical symbols. Safety colours and safety signs - Part 1. Design principles for safety signs and safety markings (ISO 3864-1:2011), Vilnius, 2011;

6.5. LST EN ISO 7010:2012 Graphical symbols. Safety colours and safety signs. Registered safety signs (ISO 7010:2011);

6.6. ORLEN S.A. Standard S8 T2 - Rules for placing safety signs related to fire protection and evacuation.

III. TERMS AND DEFINITIONS

7. The terms used herein shall be defined as follows:

Safety and/or health sign (signs) – a sign providing information or instruction about health or safety at work by means of signboard, a colour, an illuminated sign.

Prohibition sign – a sign prohibiting behaviour likely to increase or cause danger.

Warning sign – a sign giving warning of a hazard or danger.

Mandatory sign – sign prescribing specific behaviour.

Emergency escape or first-aid sign – a sign giving information on emergency exits, first aid, or rescue facilities.

Fire safety sign – a sign referring to a specific object, activity or situation, safety requirements and providing information or instructions by means of a signboard and colour.

Information sign – a sign providing information other than that referred by prohibition, warning, mandatory, emergency escape or first-aid signs.

Signboard – a sign which provides specific information by a combination of shape, colour and a symbol or pictogram which is rendered visible by lighting of sufficient intensity.

Supplementary signboard – a sign which provides supplementary information and is used together with a signboard.

Safety colour – colour which has specific meaning in terms of safety.

Symbol or pictogram – a picture which describes a situation or prescribes specific behaviour and is used on a signboard or illuminated surface.

Hazard pictogram – an image that includes a symbol and other graphical elements, e.g., frame, background or specific colors intended to provide information about hazard.

Illuminated sign – a sign produced by a device made of transparent or translucent materials which are illuminated from the inside or the rear in such a way as to give the appearance of a luminous surface.

Photoluminescent sign – a sign which absorbs ambient light: after absorbing visible light for 10-20 minutes, this sign will glow around 8 hours and longer in darkness. These signs do not require any power source.

IV. RESPONSIBILITY

8. Heads of organizational units shall be responsible for installation, renewal and maintenance of signs at facilities supervised by them and for development of layout plans for the same.

V. GENERAL REQUIREMENTS

General requirements for safety and health signs and their use

9. Signs must be installed where it is impossible to avoid or minimize the risk by means of collective safety measures (e.g. at the entrances to the danger zone (areas, premises), near hazardous objects, etc.). Sign must be removed when situation it refers to ceases to exist.

10. Signs must be placed in sufficiently illuminated, easily accessible and clearly visible location. Signs must be sufficiently large and clear to be easily seen and understood (see Fig. 1.).

Fig. 1. Sizes of the signs depending on the distances to make the sign legible (visible).

11. Evacuation signs should be as close to the source of light as possible to ensure sufficient luminosity. Photoluminescent evacuation signs must be installed in places with sufficient daylight and/or electrical lights to ensure the sufficient luminous flux illuminating these signs.

12. Signs are to be made of shock and weather-resistant materials suitable for the surrounding environment.

13. In the territories and buildings of process facilities fire safety signs indicating the location of firefighting equipment and first-aid signs showing the location of emergency showers and eye flushing stations must be arranged so that employee present in any hazardous place of process facility or building would be directed to the closest location of such equipment. Signs showing evacuation routes must be arranged in the building so that employee is directed towards the nearest exit from the building.

14. The effectiveness of a sign must not be impaired by:

14.1. Other signs or emission produced by other sign of the same type impairing visibility. Therefore, too many signs in close proximity should be avoided, two illuminated signs which may be confused should not be used together, illuminated sign should not be used in the proximity of any another similar source of light;

14.2. Poor design, incorrect positioning, poor condition or incorrect functioning of signs or signaling devices.

15. Signs must be cleaned, maintained, checked, repaired, and if necessary replaced on a regular basis to ensure that they retain their intrinsic and/or functional qualities.

16. Signs requiring some form of power must be provided with a guaranteed emergency supply in the event of a power cut, unless the hazard has thereby been eliminated.

Requirements for signboards

17. Signboards are used for signs relating to prohibitions, warnings and mandatory requirements and the location and identification of emergency escape routes, fire and first-aid facilities.

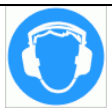
18. The signboards are selected in accordance with their specific object (signboards indicating a prohibition, a warning, a mandatory action, an escape route, an emergency or fire-fighting equipment):

18.1. Mandatory signs (see Table 1).

Intrinsic features: round shape; white pictogram on a blue background.

Mandatory signs

Table 1

Hearing protection required		General mandatory sign	
Eye protection must be worn		Safety gloves must be worn	
Safety helmet must be worn		Face protection must be worn	
Safety boots must be worn		Respiratory equipment must be worn	
Respiratory equipment must be worn		Safety harness must be worn	
Safety overalls must be worn			

18.2. Warning signs (see Table 2).

Intrinsic features: triangular shape; black pictogram on a yellow background with black edging.

Warning Signs

Table 2

General warning (used in large storages of hazardous substances or mixtures).		Harmful or irritant substance	
Explosive atmosphere		Flammable material or high temperature (used when special sign warning of high temperature is absent)	
Obstacles		Corrosive material	
Slippery surface		Toxic material	
Hot surface		Oxidising material	
Low temperature		Explosive material	
Falling objects		Electric shock risk	

18.3. Prohibition signs (see Table 3).

Intrinsic features: round shape; black pictogram on white background, red edging and diagonal line (from top left to bottom right at 45°).

Prohibition signs

Table 3

No smoking		Do not use mobile phones	
No access for unauthorized persons		No cameras	
Smoking and naked flames forbidden		No access for pedestrians	

18.4. Emergency escape and first-aid signs (see Table 4, 5)

Intrinsic features: rectangular or square shape; white pictogram on a green background.

Evacuation route signs must be photoluminescent or illuminated.

18.5. Lighted evacuation signs must be installed in places where the evacuation premises or routes do not get any daylight or artificial light and thus do not get a sufficient luminous flux, i.e.:

• when evacuation routes are not illuminated because no electrical equipment has been installed;

• when evacuation routes or certain sections of these routes stay non-illuminated for long periods of time.

18.6. Photoluminescent evacuation signs can be used together with the lighted evacuation signs.

First aid signs

Table 4

First aid post		Emergency eyewash	
Emergency phone		Emergency shower	

Escape directional signs

Table 5

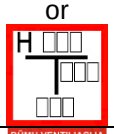
Emergency exit		Exit	
Emergency exit arrow left		Emergency exit arrow right	
Exit down left		Exit down right	
Exit up left		Exit up right	
Emergency exit straight		Meeting point	
Signs showing additional direction			

18.7. Fire-fighting signs (see Table 6).

Intrinsic features: rectangular or square shape; white pictogram on a red background.

Fire safety signs

Table 6

Fire extinguisher		Fire hose reel	
Fire blanket		Wheeled fire extinguisher	
Fire emergency number		Fire alarm	
Fire point		Fire hydrant	 or 
Fire ladder		Fume extraction system	
Firewater standpipes			

Requirements for signs on containers

19. Containers used for hazardous chemical substances and mixtures must bear clearly visible name of substance/mixture and be labelled with relevant pictogram(s) in accordance with Material Safety Data Sheet.

Requirements for signs on process vessels

20. Every process vessel must bear clearly visible information tag with tag number of process vessel specified on it. Recommended features of tags: rectangular shape, red number on yellow background. Recommended dimensions of tag: 550mm x 220mm. Depending on the size of a process vessel, a tag may be either smaller (e.g. for pumps) or bigger (e.g. for tanks).

Requirements for signs on piping

21. Pipework must bear labels, either in self-adhesive or painted form, as shown in Fig. 1 below. Labels must meet color coding provided in Table 7. A pipeline or label must bear the name of the medium, relevant hazard icon(s) (if any), and the direction in which the medium is transported. If medium can flow to both sides, label must show accordingly. Recommended dimensions of labels are provided in Table 8.

Table 7

Color of label/pipework	Color of inscription	Colour	Fluid
Yellow	Black		Nitrogen and flammable gas (butane, propane, propene, butane–butene fraction, propane–propene fraction, hydrogen, hydrogen gas, hydrocarbon gas, fuel gas, hydrogen sulfide gas, sulfur dioxide, liquefied gas, natural gas, etc.).
Brown	White		Flammable liquids hazardous to health and environment (crude oil, gasoline and its components, kerosene, JET A-1, diesel and its components, isomerizate, oligomerisate, alkylate, MTBE, methanol, ethanol, fuel oil, vacuum distillate, visbreaker residue, vacuum residue, bitumen, gas condensate, tetrachlorethylene, Stadis, lubeoil, etc.).
Orange	Black		Toxic and corrosive substances (caustic soda, monoethanolamine, ammonia water, phosphoric acid, additive AO-85, Tolad, etc.).
Green	White		Potable, cooling and other water.
Blue	White		Oxygen, compressed and other air.
Red	White		Firefighting media.

Fig. 1

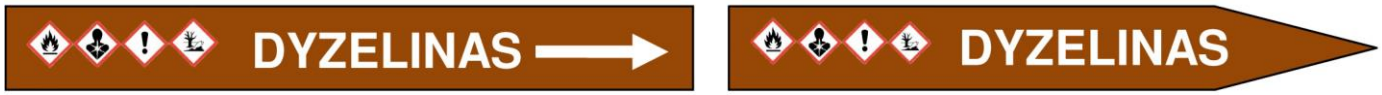
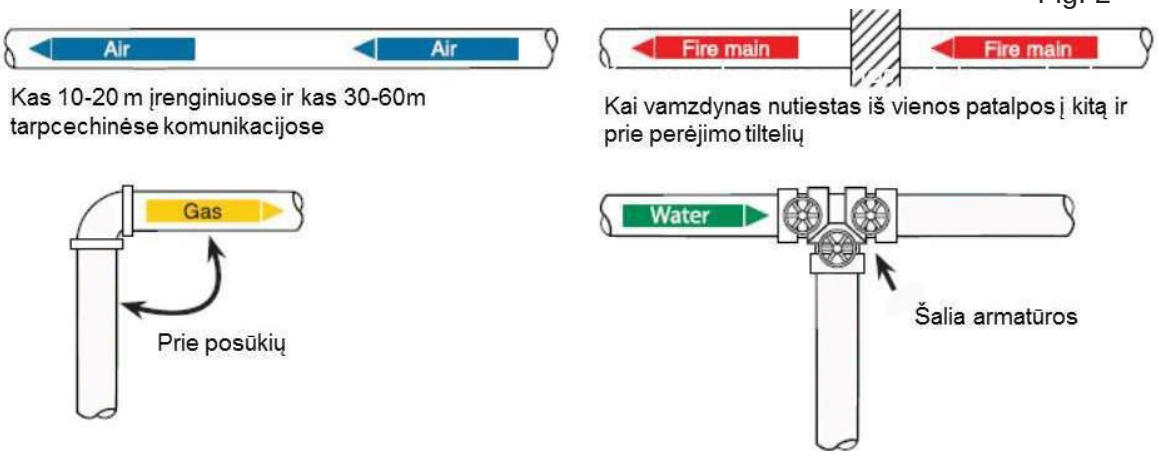


Table 8

Outer diameter of pipework, including coating	Minimum length of label	Minimum height of letters
19-32 mm	203 mm	13 mm
38-51 mm	203 mm	19 mm
64-152 mm	305 mm	32 mm
203-254 mm	610 mm	64 mm
254+	813 mm	89 mm

22. Pipework must be labelled before or after each branch, turn, on/off valve, near catwalks, on both sides of barriers, road bridges and expansion joints, in pipe racks in points of ascending/descending. ISBL pipework must be labeled every 10-20 m and OSBL pipelines every 30-60 m. For multiple parallel pipelines in the same place, it is recommended to label piping in one line. Marking examples of pipelines are provided in Fig. 2.

Fig. 2



Requirements for marking obstacles on employee pathways

23. The Company areas of the employee pathways, where there is a danger of tumbling, colliding with obstacles, shall be marked with alternating black and yellow oblique stripes of the same width or other means shall be used warning the employees about these dangers (e.g., enclosed, marked with signs “Obstacles”, etc.).

Requirements for marking obstacles on vehicle traffic routes

24. Obstacles in Company's transport traffic roads shall be marked with diagonal black and white stripes in line with the requirements set forth in Annex 2.

Sign layout plan development

25. Safety and health sign layout plans shall be developed for each facility (territory, building), and updated in case of changes.

26. Sign layout plan shall indicate name of facility, territory, premises, drawing, legend. Sign layout plan must be signed by the head of organizational unit and agreed with representative of Occupational and Process Safety Control Department.

27. Safety and health sign layout plans must be registered with Occupational and Process Safety Control Department of the Company.

VI. FINAL PROVISIONS

28. This Procedure shall be amended accordingly after new applicable normative legal acts or in-house regulations come into effect or are amended.

29. Responsibility of the periodic review and, where necessary, updating of the present Procedure shall lie with the Director of Quality, Labour Safety and Environmental Control of the Company.

VII. ANNEXES

Annex 1 – Hazard categories, hazard pictograms of hazardous substances.
Annex 2 – Vertical marking.

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HAZARD CATEGORIES, HAZARD PICTOGRAMS

Hazard pictogram		Hazard classes and categories
	**Corrosion**	Corrosive to metals (hazard category 1), Skin corrosion (hazard categories 1A, 1B, 1C), Serious eye damage (hazard category 1).
	**Environment**	Hazardous to Aquatic Environment (Acute Category 1) (Chronic Category 1, 2).
	**Gas cylinder**	Gases under pressure, Compressed gases; Liquefied gases; Refrigerated liquefied gases; Dissolved gases.
	**Exclamation mark**	Acute toxicity (oral, dermal, inhalation) (hazard category 4), Skin irritation (hazard category 2), Eye irritation (hazard category 2), Skin sensitisation (hazard category 1), Specific target organ toxicity — single exposure (hazard category 3) Respiratory tract irritation, Narcotic effect.
	**Exploding bomb**	Unstable explosives, Self reactive substances and mixtures, (Types A, B), Organic peroxides (Types A, B).
	**Flame**	Flammable gases (hazard category 1), Flammable aerosols, (hazard categories 1, 2), Flammable liquids (hazard categories 1, 2, 3), Flammable solids (hazard categories 1, 2), Self-reactive substances and mixtures (Types B, C, D, E, F), Pyrophoric liquids (hazard category 1), Pyrophoric solids (hazard category 1), Self-heating substances and mixtures (hazard categories 1, 2), Substances and mixtures, which in contact with water, emit flammable gases (hazard categories 1, 2, 3), Organic peroxides, (Types B, C, D, E, F).
	**Flame over circle**	Oxidising gases (hazard category 1), Oxidising liquids (hazard categories 1, 2, 3), Oxidising solids (hazard categories 1, 2, 3).
	**Hazards to health**	Respiratory sensitisation (hazard category 1), Germ cell mutagenicity (hazard categories 1A, 1B, 2), Carcinogenicity (hazard categories 1A, 1B, 2), Reproductive toxicity (hazard categories 1A, 1B, 2), Specific Target Organ Toxicity — single exposure (hazard categories 1, 2), Specific Target Organ Toxicity — repeated exposure (hazard categories 1, 2), Aspiration hazard (hazard category 1).
	**Skull and crossed bones**	Acute toxicity (oral, dermal, inhalation), hazard categories 1, 2, 3.

VERTICAL MARKING

1. Diagonal black and white stripes (see Fig. 1) shall be used to mark vertical elements of road obstacles (supports, barrier piping, etc.).

1.1. Marking with black and white stripes directed down from left to right shall be used on the left side of the road, and marking with black and white stripes directed down from right to left shall be used on the right side of the road. Marking with black and white stripes directed down from center to both sides shall be used to mark the obstacles to be bypassed from both sides.

1.2. Marking is always obligatory when the distance from structure to the roadside is less than 1 m or when the structure is on the roadside. When needed, the structures further away from road, however, dangerous for traffic, may also be marked.

1.3. Width of white and black marking stripes depends on the size of area to be marked (see Fig. 1): when $H < 2.0$ m, and $B \leq 0.3$ m, $a = 0.1$ m; when $H < 2.0$ m, $B > 0.3$ m, $a = 0.15$ m.

1.4. When vertical surface area of road obstacle is large, it is allowed to mark only 0.5 m width and 2 m height edges of the structure located closer to the road.

1.5. When needed, obstacles may be marked using rectangular boards of 0.35 m in width and 0.7 m in height or 0.45 m in width and 0.9 m in height with marking (marking stripe width is 0.1 m and 0.15 m, respectively) which shall be fixed on obstacle or put just next to road obstacle at a height of 0.10–0.30 m from roadside.

1.6. White marking stripes shall be light reflecting.

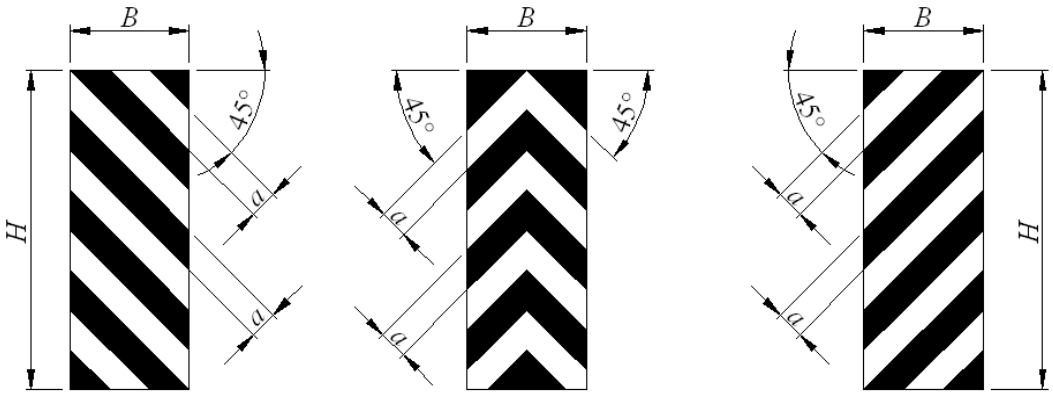

Fig. 1 Marking with diagonal black and white stripes

2. Marking with diagonal black and white stripes (see Fig. 2) shall be used to mark lower side of the structures located over roads when the distance from these to the road is less than 5 m. Marking is painted or installed in the middle of traffic lane. It is allowed to use the marking throughout the width of the traffic road. White marking stripes shall be light reflecting.

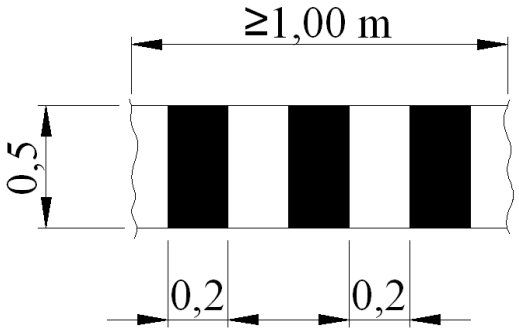

Fig. 2. Marking with vertical black and white stripes