



**PUBLIC COMPANY ORLEN LIETUVA
GENERAL DIRECTOR**

**ORDER
REGARDING APPROVAL OF OCCUPATIONAL SAFETY AND HEALTH PROCEDURE
BDS-41 SAFETY AND HEALTH SIGNS**

24 August 2018, No. TV1(1.2-1)- *362*
Juodeikiai Vill., Mažeikiai Distr. Municipality

1. I hereby approve the Occupational Health and Safety Procedure BDS-41 Safety and Health Signs (hereinafter the Procedure, attached hereto).
2. Establish that Procedure approved herein shall come into force on 17 September 2018.
3. Establish that Items 22 and 23 of Procedure approved herein shall come into force on 31 January 2019.
4. Assign the heads of organizational units of the Public Company ORLEN Lietuva (hereinafter – the Company) listed in the distribution index (attached) hereof to hold additional indoctrination for concerned employees on the Procedure approved hereby before 17 September 2018.
5. Consider Public Company ORLEN Lietuva General Director Order No TV1(1.2-1)-409 of 22 December 2014 and Occupational Health and Safety Procedure BDS-41 Safety and Health Signs approved with order referred to herein as no longer effective.
6. Assign the responsible employee of Executive Office to familiarize with the present Order the Company employees listed in the distribution index attached hereto.

General Director

Michal Rudnicki

Prepared by
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Rasima Lukašienė

__-08-2018

Document owner
Director of Quality, Labour Safety and Environmental Control
Arkadiusz Marcin Pawlak

__-08-2018

AGREED WITH

Organizational unit	Position and full name of employee	Signature, date
Operations Division	Deputy General Director for Operations Dainius Čiuta	
Occupational and Process Safety Control Department	Occupational and Process Safety Control Manager Rolandas Rupšys	
Legal Department	Legal Adviser Zenon Liachovič	
Business Support Department	Business Support Coordinator Nerijus Vainutis	

PUBLIC COMPANY ORLEN LIETUVA

APPROVED BY
Director of Quality, Labour Safety
and Environmental Control

24 August 2018
Order No TV1(1.2-1)-362

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

I. PURPOSE

1. The purpose of the present Procedure is to establish minimum requirements for the provision of safety and health signs at work in Public Company ORLEN Lietuva (hereinafter – the Company).
2. Establish the requirements for personnel warning and protection against potential hazards using safety and health signs at the Company.

II. SCOPE OF APPLICATION

3. The requirements of this Procedure are binding to ORLEN Lietuva (hereinafter - Company) employees as well as to contractors using safety and health signs.
4. The Procedure provides the 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 of marketable hazardous substances and mixtures, products and equipment.
 - 5.2. Regulating of road, railway, seaborne, inland water and air transport.
 - 5.3. Marking of heat supply piping. Requirement applicable to the marking of such piping are provided in Instructions for Operation of Heat Supply Piping BTE-1.

III. REFERENCES

6. This Procedure shall apply in conjunction with the following legal acts and other documents (without limitation) as amended to date:
 - 6.1. Regulations for Use of Occupational Safety and Health Signs at Work approved by the Minister of Social Security and Labor;
 - 6.2. Regulations for 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;
 - 6.3. 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);
 - 6.4. LST EN ISO 7010:2012 Graphical symbols. Safety colours and safety signs. Registered safety signs (ISO 7010:2011).

IV. TERMS AND DEFINITIONS

7. Terms used herein are 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 geometric shape, colour and 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 - 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 made of transparent or translucent materials which is illuminated from the inside or the rear to give the appearance of a luminous surface.

V. 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.

VI. GENERAL REQUIREMENTS

General requirements for safety and health signs and their use

9. Signs are to be used in places where hazard cannot be prevented or minimized through the application of collective protective equipment or other control measures (e.g. near entries into hazardous zones, near hazardous object, 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.

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

12. 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.

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

13.1. 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;

13.2. Poor design, insufficient number, incorrect positioning, poor condition or incorrect functioning of signs or signaling devices.

14. 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.

15. 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

16. 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.

17. The shape and colours of 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):

17.1. 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			





17.2. 17.1. 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	

17.3. 17.1. Prohibition signs (see Table 3).

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

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	





17.4. 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.

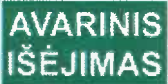









First aid signs

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	

17.5. 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 emergency number		Fire alarm	
Fire point		Fire hydrant	 or 
Fire ladder			

Requirements for signs on containers

18. 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

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



Requirements for signs on piping

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



Fig. 1

Table 7

Color of label/pipework	Color of inscription	Colour	Medium
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.

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 mm and more	813 mm	89 mm

21. 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. Pipework must be labelled every 10-20 m in the territories of process units and every 30-60 m for OSBL pipelines. When there are many pipelines in parallel in one place, it is recommended to mark the pipelines according to one line. Marking examples of pipelines are provided in fig. 2.

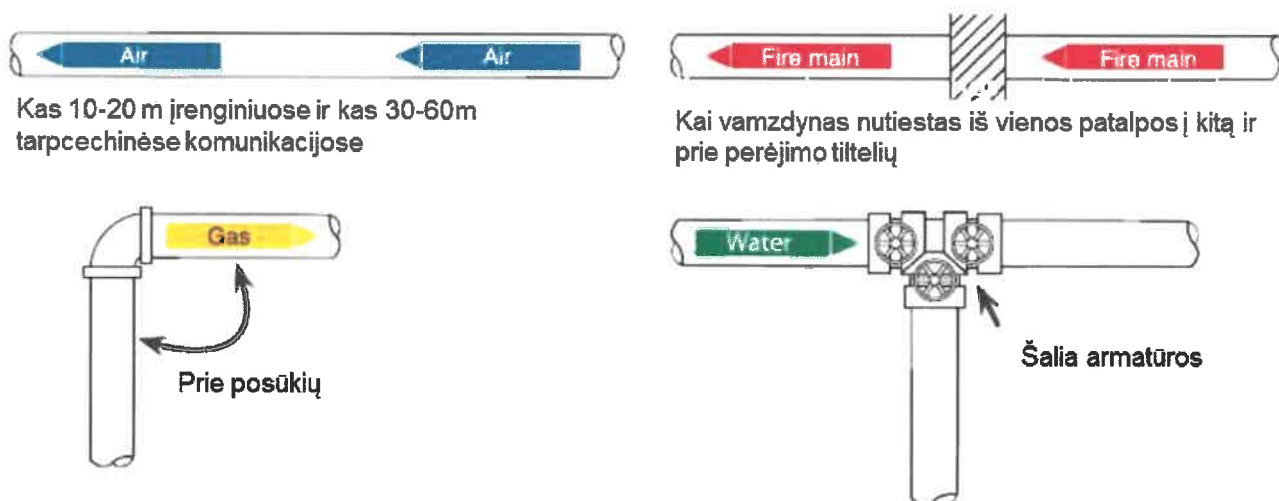


Fig. 2

Requirements governing signs used for obstacles in the employee pathways

22. 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 governing signs used for obstacles in transport traffic places

23. Obstacles in Company's transport traffic roads shall be marked with "diagonal black and white band" signs keeping to the requirements set forth in Annex No. 2.

Sign layout plan development

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

25. 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.

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

VII. FINAL PROVISIONS

27. The Procedure shall be amended or modified accordingly after new normative legal acts or the Company's regulations the requirements set in which are binding upon come into effect, or such have been amended or modified accordingly.

28. 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.

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___-08-2018

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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 cross bones	Acute toxicity (oral, dermal, inhalation) (hazard categories 1, 2, 3).

VERTICAL MARKING

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

1.1. Marking when black and white bands are directed down from left to right shall be used on the left side of the road, and marking when black and white bands are directed down from right to left shall be used on the right side of the road. Marking when the black and white bands are directed down from center to both sides shall be used to mark the obstacles to be driven round 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 bands 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, the 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 band 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 bands shall be light reflecting.

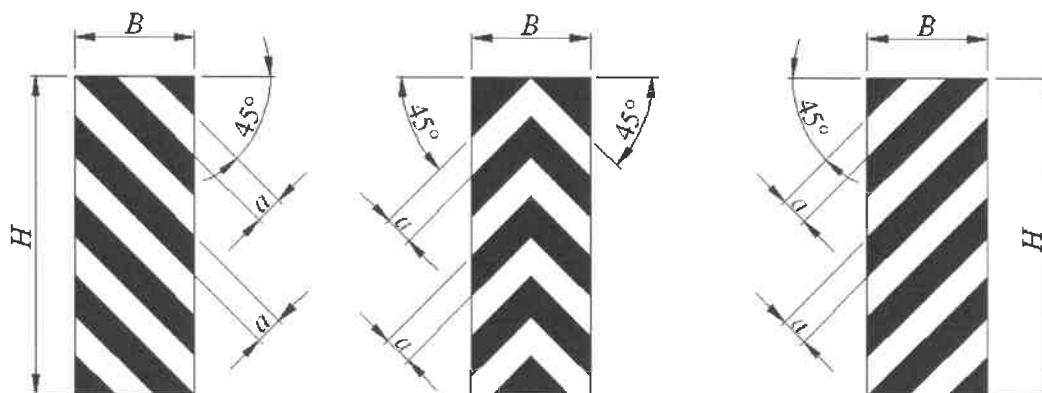


Fig. 1. Marking "diagonal black and white bands"

2. Marking "diagonal black and white bands" (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 bands shall be light reflecting.

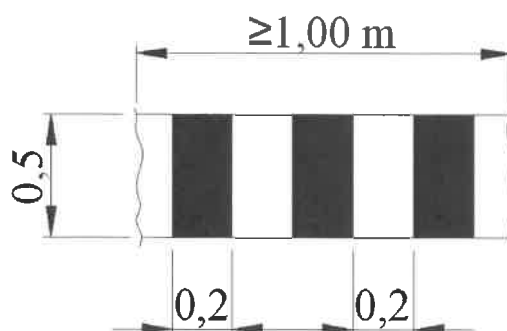


Fig. 2. Marking "vertical black and white bands"