Health and Safety at Work (Hazardous Substances—Markings for Pipework Connected to Above Ground Stationary Tanks) Safe Work Instrument 2017

This safe work instrument is approved under section 227 of the Health and Safety at Work Act 2015 by the Minister for Workplace Relations and Safety, after being satisfied that appropriate consultation has been carried out under section 227(3) of that Act.

Contents

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Safe Work Instrument

1 Title

This is the Health and Safety at Work (Hazardous Substances—Markings for Pipework Connected to Above Ground Stationary Tanks) Safe Work Instrument 2017.

2 Commencement

This safe work instrument comes into force on 1 December 2017.

3 Overview

This safe work instrument specifies requirements relating to the form, position, and colour-coding of markings for pipework connected to certain above ground stationary tanks, for the purpose of regulation 17.78(2)(b) of the Regulations.

4 Interpretation

(1) In this safe work instrument, unless the context otherwise requires,—

Act means the Health and Safety at Work Act 2015

additive piping means piping used to mix an additive with fuel

elevated pipe rack means an elevated structure designed and built specifically to support multiple pipes

fuel storage depot boundary means the boundary of a place that is used for the storage of fuel

pipework function marker means a marker that—

(a) indicates the function of a pipe; and

(b) meets the specifications prescribed in clause 9(3)

product identification marker means a marker that—

(a) identifies the product transferred by a pipe; and

(b) subject to clause 9(2), meets the specifications prescribed in clause 9(1)

product identification tag means a product identification marker that meets the specifications prescribed in clause 9(2)

Regulations means the Health and Safety at Work (Hazardous Substances) Regulations 2017

(2) Any term or expression that is defined in the Act or the Regulations and used, but not defined, in this safe work instrument has the same meaning as in the Act or the Regulations.

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5 Application

(1) This safe work instrument applies to pipework connected to an above ground stationary tank that—

(a) forms part of a stationary container system; and

(b) has a water capacity of 60 000 L or more; and

(c) is used or intended to be used to contain a Class 3.1 substance.

(2) Despite subclause (1), this safe work instrument does not apply to pipework that is a pipe outside a fuel storage depot boundary.

(3) To avoid doubt, this safe work instrument does not apply to a pipeline that is subject to the Health and Safety in Employment (Pipelines) Regulations 1999.

6 Pipework to be marked

In order to comply with this safe work instrument, a relevant PCBU must ensure that pipework is marked in accordance with clauses 7 to 9 for the purpose of identifying—

(a) the product in the pipework; and

(b) the function of the pipework.

7 Positioning of pipework markers

(1) For a pipe of not more than 50 m in length, a product identification marker must be applied at each of the following positions on the pipe:

(a) a point on each side of every manifold system that the pipe leads into and away from:

(b) a point on each side of every wall, bund wall, boundary fence, or other barrier that the pipe passes through, that is within 1 m of the wall, bund wall, boundary fence, or other barrier:

(c) if the pipe enters the ground, a point within 1 m of the ground:

(d) if the pipe is used in a loading gantry,—

(i) adjacent to the main control valve or flow meter for the pipe;

(ii) within 1 m of each hose connection point for the pipe on either the loading arm or the hose:

(e) if the pipe forms part of any suction and discharge pipework, adjacent to every pump:

(f) adjacent to every tee connection and valve:

(g) if the pipe enters or exits a tank, adjacent to the point of entry or exit (as the case requires):

(h) at every point where the product in the pipe needs to be—

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(i) readily identifiable in an emergency; or

(ii) identified for the purpose of indicating a hazard:

(i) at every point in the pipework where it is necessary for the purpose of preventing a serious risk to health and safety to avoid confusing pipes that have the same base identification colour but that contain different products.

(2) For a pipe of more than 50 m in length, product identification markers must be applied—

(a) in accordance with subclause (1); and

(b) at each of the following positions on the pipe:

(i) at intervals not exceeding 50 m, if the pipe is visible along its length:

(ii) at intervals not exceeding 8 m, if the pipe is not visible along its length:

(iii) at the point where the pipe enters any elevated pipe-rack:

(iv) at the point where the pipe exits any elevated pipe-rack.

(3) In addition to the requirements of subclauses (1) and (2), a pipework function marker must be applied to every pipe that is a wharfline, bunker line, or transfer line.

8 Pipework used for fire-fighting water or foam

Despite clause 7, a pipe used for fire-fighting water or foam (a fire-fighting product) must, for the purpose of identifying the product in the pipe,—

(a) be painted along its entire length in accordance with the colour-coding specified in columns 4 and 5 of Schedule 1 for "Fire water" or "Foam" (as the case requires); or

(b) have a product identification marker applied—

(i) at every point on the pipe where the pipe needs to be readily identifiable in an emergency; and

(ii) at a point on the pipe that is within 1 m of a fire-fighting connection point, if—

(A) the pipe is in close proximity to a pipe used for a different fire-fighting product; and

(B) both pipes are within 1 m of the fire-fighting connection point.

9 Specifications for markers

(1) Subject to subclause (2), a product identification marker—

(a) must—

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(i) be in one of the forms prescribed in Schedule 2; and

(ii) be coloured-coded in accordance with Schedule 1; and

(iii) have a minimum text height of 24 mm; and

(iv) have a single arrow—

(A) at one end to indicate flow direction; or

(B) if the product in the pipe may be conveyed in either direction, at each end; and

(b) may—

(i) be applied as a self-adhesive pre-printed label; or

(ii) be painted onto the pipe.

(2) If a pipe is too small in diameter or too short in length to be marked with a product identification marker in accordance with subclause (1) (for example, additive piping), product identification tags may be affixed to the pipe with cable ties, provided that the tags are—

(a) in the form prescribed in Schedule 3; and

(b) made of permanent material such as laminated plastic; and

(c) if the pipe contains a product listed in Schedule 1, colour-coded in accordance with Schedule 1; and

(d) if the pipe does not contain a product listed in Schedule 1,—

(i) coloured using black text on a white background; and

(ii) marked with the product name (but not the proprietary name of the product); and

(iii) in the case of a pipe that contains an additive,—

(A) marked after the product name with the word ‘additive’; and

(B) marked before the product name with the relevant oil company name, where this is necessary to distinguish between specific additives.

Example

ABC Oil Limited MS additive

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(3) A pipework function marker—

(a) must be—

(i) in the form prescribed in Schedule 4; and

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(ii) coloured using black text on a white background; and

(b) may be—

(i) applied as a self-adhesive pre-printed label; or

(ii) painted onto the pipe; and

(c) may contain additional wording to reflect local terminology, such as a company name or product description.

Examples

DEF Limited Bunker Line

GHI Limited Transfer Line

Black Oil Wharfline

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Schedule 1

Product identification marker colour codes

Cls 8(a), 9(1)(a)(ii), 9(2)(c), 9(2)(d)

Product name	Text colour	Arrow colour	Background colour	Colour specification
98 MOTOR SPIRIT	White	White	Bronze	PMS 161
95 MOTOR SPIRIT	White	White	Red	PMS 187
91 MOTOR SPIRIT	Black	Black	White	-
VAPOUR RECOVERY	Black	Black	White	-
JET A1	White	White	Black	-
DIESEL	White	White	Jade Green	AS2700 G21 PMS 3295
AVGAS 100	White	White	Colour 1 – Jade Green	AS2700 G21 PMS 3295
			Colour 2 – Red	BS 5252 04 E 53 PMS 186
			Stripe colour - white	-
SLOPS	White	White	Black	-
HEAVY FUEL OIL	White	White	Brown	AS2700 X54 PMS 4635
LIGHT FUEL OIL	White	White	Brown	AS2700 X54 PMS 4635
WASTE OIL	White	White	Black	-
WATER	White	White	Forest Green	BS 5252 12 C 39 PMS 357
FIRE WATER	White	White	Red	BS 5252 04 E 53 PMS 186
STEAM	Black	Black	Silver-grey	BS 5252 00 A 01 PMS 877
WHITE SPIRITS	White	White	Orange	BS 5252 06 E 55 PMS 151
KEROSINE	White	White	Powder Blue	BS 5252 18 E 51 PMS 298
FOAM	White	White	Red	BS 5252 04 E 53 PMS 186

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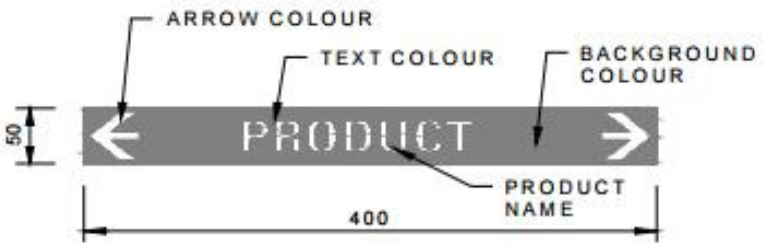
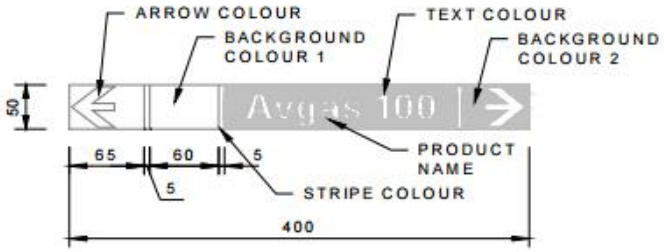
Schedule 2

Forms of product identification marker

Cl 9(1)(a)(i)





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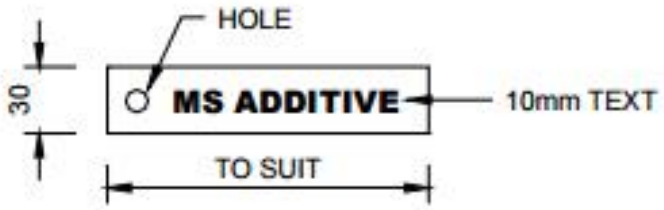
Schedule 3

Form of product identification tag

Cl 9(2)(a)



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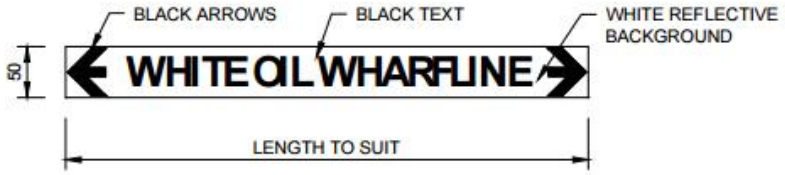
Schedule 4

Form of pipework function marker

Cl 9(3)(a)(i)



Dated at Wellington this [*date*] day of [*month*] [2017].

[*Name*],
Minister for Workplace Relations and Safety

Date of notification in *Gazette*:
This safe work instrument is administered by WorkSafe New Zealand.

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