



Purpose and Introduction

1.1 Purpose

This document mandates minimum requirements for high visibility clothing that is to be provided for wearing by people when on the lineside or on or near the line.

It applies to all high visibility clothing worn in order to meet the requirements of GE/RT8000 Rule Book and Rail Industry Standard (RIS-3279-TOM) 'High Visibility Clothing',

1.2 Introduction

1.2.1 Background

High visibility clothing is an essential item of personal protective equipment, providing drivers of rail movements with a conspicuous warning of the presence of people within view on the lineside or on or near the line. Similar benefits accrue to those managing the safety of workgroups, by improving visibility of people when needing to account for them having moved to a place of safety.

1.2.2 In addition to the importance of lineside visibility, it is also useful, in certain defined circumstances, for some role titles (for example of staff engaged in incident management or rendering first aid) to be added to high visibility clothing. This will assist in clearly identifying staff with critical responsibilities in certain situations.

1.2.3 Where reference is made to the BSI Standards Publication it refers to the version in force. Stakeholders should refer to the most up to date version of that publication.

1.3 Principles

1.2.2.1 The requirements of this document are based on the following principles:

a) High visibility clothing worn by people on the lineside or on or near the line should conform to a single standard for the colour and luminance of background material and that this standard will accord with the detail contained within BS EN ISO 20471:2013 High visibility clothing -Test methods and requirements (ISO 20471:2013). The colour specific requirements within this standard conform to the range specified within BS EN ISO 20471:2013 clause 5.1.2. In order to confine this to a specific orange colour, and to prevent the selection of colour at the red end of the spectrum, the precise chromaticity co-ordinates for the colour are specified in Appendix A.

b) High visibility clothing worn by people on the lineside or on or near the line should conform to a single standard for the photometric and physical performance of retro-reflective material to aid conspicuousness in darkness or poor visibility. This standard will accord with the detail contained within BS EN ISO 20471:2013.

c) Limits should be established regarding additional markings or words that identify the employing company or particular roles eg Rail Incident Officer (RIO), to maximise the impact of a restricted number of titles, assist in recognition of incident management roles to members of the emergency services and avoid information overload.

d) There are circumstances, where material to cover a large surface area is not considered necessary, where use of a high visibility mini-vest is permitted.

Requirement for high visibility clothing

2.1 Requirement applicable to infrastructure managers and railway undertakings

2.1.1 Technical specification for high visibility clothing

2.1.1.1 Infrastructure managers and railway undertakings shall provide high visibility clothing that meets, as a minimum, the technical requirements specified in Appendix A of this policy and procedure.



Health and safety responsibilities

3.3.1 Users of documents published by RSSB are reminded of the need to consider their own responsibilities to ensure health and safety at work and their own duties under health and safety legislation. RSSB does not warrant that compliance with all or any documents published by RSSB is sufficient in itself to ensure safe systems of work or operation or to satisfy such responsibilities or duties.

Appendix A

Design requirements for high visibility clothing

The content of this appendix is mandatory.

A.1 Minimum areas of visible material

A.1.1 High visibility clothing shall meet, as a minimum, with the requirements for Class 2 garments set out in Table 1 of BS EN ISO 20471:2013.

A.1.2 Where duties require the use of high visibility clothing, but the nature of the work does not involve possible obscuring of the high visibility clothing, a high visibility mini-vest having a reduced area of visible material, conforming to the provided standards is permitted.

A.2 Background material colour characteristics

A.2.1 The target colour of new background material shall be fluorescent orange with chromaticity and luminance defined as follows:

Colour	Chromaticity co-ordinates		Minimum luminance factor β_{min}
	x	y	
Fluorescent orange	0.588	0.371	0.4

Table A.1 Target colour for background material

A.2.2 The tolerance of the fluorescent orange target colour shall be in accordance with Table 2 in Section 5 of BS EN ISO 20471:2013 but within the following limits with the luminance factor of 0.4 remaining unchanged:

Chromaticity co-ordinates	
x	y
0.610	0.390
0.560	0.380
0.585	0.355
0.640	0.360

Table A.2 Tolerance of target colour for background material

A.2.3 The change in chromaticity after light exposure and colourfastness shall conform to the requirements of BS EN ISO 20471:2013.

A.3 Retro-reflective material characteristics

A.3.1 The photometric and physical performance requirements for the retro-reflective material shall conform to the requirements stipulated in BS EN ISO 20471:2013, Section 6, Table 4 for separate performance material, level 2.



A.4 Technical requirements for high visibility mini-vests

A.4.1 High visibility mini-vests shall consist of background material and retro-reflective material, ie combined performance material shall not be used. Figure A1 shows an example of the general arrangement of the high visibility mini-vest illustrating the disposition of background and retro-reflective material.

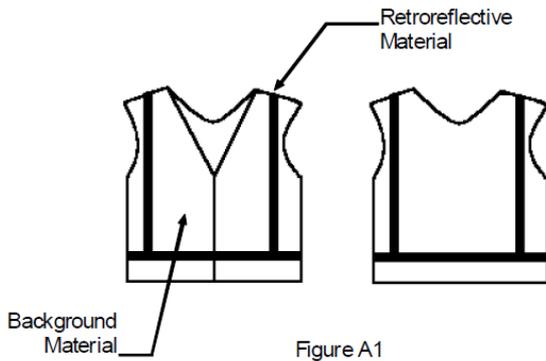


Figure A.1 Disposition of background and retro-reflective material for high visibility minivests

A.4.2 High visibility mini-vests shall conform to the following minimum areas of visible material:

Background material	0.26 m ²
Retro-reflective material	0.12 m ²

Table A.3 Minimum area of visible material for high visibility mini-vests

A.4.3 The background material shall encircle the torso and any markings shall be in accordance with limitations stated in Appendix A.4.2 of this standard.

A.4.4 Bands of retro-reflective material shall be not less than 50 mm wide.

A.4.5 High visibility mini-vests shall have one horizontal band of retro-reflective material around the torso. The bottom of the band shall not be less than 50 mm above the bottom edge of the mini-vests. High visibility mini-vests shall have bands of retroreflective material joining the horizontal torso band from the front to the back over each shoulder.

A.4.6 The high visibility mini-vest background material colour characteristics shall conform to the requirements of Appendix A.2 of this Standard.

A.4.7 The high visibility mini-vest retro-reflective material shall conform to the requirements of Appendix A.3 of this Standard.

A.5 Identification and company markings on high visibility clothing

A.5.1 Except in the case of the high visibility clothing worn by a Rail Incident Officer (RIO) or First Aider, the background material shall not be obscured by the addition of any other features, unless provision has been allowed for in the specification such that the minimum areas of background and retro-reflective material have been preserved.

A.5.2 The only permitted features are the company or project name and logo that identify who an individual is working for and titles or designations associated with the management of incidents, as listed:



- a) Rail Incident Officer (RIO).
- b) Press Officer.
- c) Recovery Engineer.
- d) First Aider.
- e) Train Operators' Liaison Officer (TOLO).

A.5.3 In the case of the high visibility clothing worn by a Rail Incident Officer the visible background material area of the Class 2 jacket shall accommodate the special markings illustrated in Figure A2.

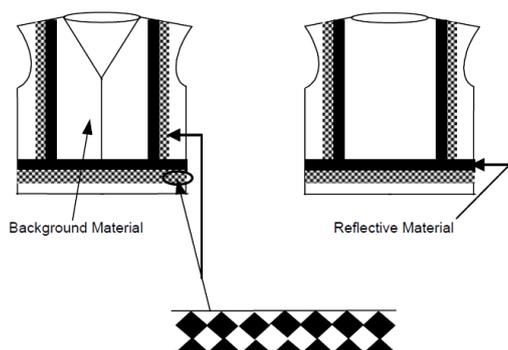


Figure A.2 Special markings on high visibility clothing

A.5.4 The special markings shall consist of 50 mm wide fluorescent lime high brightness garment tape with a black diamond pattern across the surface consisting of one full diamond and one-half diamond as detailed in Figure A2.

A.5.5 A similar pattern of special markings to those illustrated for a RIO in Figure A2, consisting of green and white chequered tape, is permitted for high visibility vests marked 'First Aider'.

Definitions

Background material

Coloured fluorescent material intended to be highly conspicuous, but not intended to comply with the requirements of this standard for retro-reflective material.

Combined performance material

Material intended to exhibit both background and retro-reflective properties.

Fluorescent material

Material that emits optical radiation at wavelengths longer than absorbed.

High visibility clothing

Warning clothing intended to provide conspicuousness.

Lineside

The area between the boundary fence and the point that is called 'on or near the line', and where someone would be within view of the driver of an approaching train or movement. A person is not on the lineside if they are on a station platform.

On or near the line

Within 3 metres of the nearest rail of any line, and on the line itself. On a platform, the term



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'on or near the line' applies only to the part of the platform within 1.25 metres of the platform edge and only when an engineering or technical activity is taking place.

Retro-reflective material

Material which is a retroreflector, but which is not intended to comply with the requirements of this standard for background material.

References

The Catalogue of Railway Group Standards gives the current issue number and status of documents published by RSSB. This information is also available from www.rgsonline.co.uk.

RGSC 01 Railway Group Standards Code

RGSC 02 The Standards Manual

Documents referenced in the text

Railway Group Standards

GE/RT8000 Rule Book

Other references

BS EN ISO 20471:2013 High visibility clothing - Test methods and requirements (ISO 20471:2013) High Visibility Clothing Rail Industry Standard RIS-3279-TOM Issue One.



Procedure

Background

As a responsible employer the SES group has an obligation to provide you with full Personal Protective Equipment (PPE) clothing when working upon the railway as outlined within the above policy contained within this document and in line the referenced standards as identified above.

The following procedure will provide you with details relevant to the issue and maintenance of PPE which us the employer and you the employee must adhere to at all times.

At the point of deployment to a role where it has been determined by means of a SES risk assessment that PPE is a requirement all PPE will be provided free of charge to respective employees.

To initiate this process, you will be required to complete Rail PPE Issue form SES/IMS/FOR/001.021

Upon receipt your uniform will be ordered and sent either to your home address or hand delivered by your line manager.

It is your obligation to maintain your PPE uniform and ensure that it is fit for purpose prior to the start of any shift – See PPE Employee Guide. Your line manager/supervisor will conduct regular periodic checks with you to ensure your PPE is clean and well maintained.

Should you lose your PPE uniform you must immediately inform your line manager, who will instruct you to complete a further Rail PPE Issue form SES/IMS/FOR/001.021 completing the lost section of the form.

Should your PPE require replacing or has been damaged you must immediately inform your line manager, who will instruct you to complete a further Rail PPE Issue form SES/IMS/FOR/001.021 completing the replacement/damaged section of the form.

Should for any reason you be asked to work in a position that requires full PPE and you items missing etc you must inform the SES Control room that you will not be able to fulfil the deployment. Equally if you are asked to work in a position that requires PPE and you have not been provided with your requested items you can refuse to work on the grounds of health and Safety – See the SES Health and Safety policy SES/IMS/POL 006. In this any employee would not be penalised for refusing to work on the grounds of Health and Safety

All subcontractors working on associated projects as instructed by the SES Group will have suitable controls in place for PPE and will follow the above policy and procedure in line with all respective standards.