

TEST REPORT



Title: Door Viewers –
Evaluation to DHF TS 02:2009

Report Number: WTE/08/008a

On behalf of UAP Limited
Bank House
16 – 18 Bank Street
Walshaw
Bury
Lancashire
BL8 3AZ

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White Technology and Engineering Ltd
Weeke Farm
Cruwys Morchard
Tiverton
Devon
EX16 8PG

info@wteltd.eu

Introduction

It was requested that WTE Ltd carry out an evaluation of the UAP range of door viewers to the Door and Hardware Federation technical standard TS 02. Following a revision to the standard in 2009, the viewers were re-evaluated to this revision.

Samples

A range of door viewers was supplied. This consisted of four samples of CILPVD for a complete evaluation plus additional samples of CILCH, CICWH, CICBL, CILGA, CILSA, CVPLPVD, and CVPLWH to enable these variants to be assessed.

- The CIL* range were long length, standard viewing angle
- The CIC* range were short length, standard viewing angle.
- The CVPL* range were long length, wide viewing angle.

The finish codes were:

- PVD – Brass PVD
- CH – Chrome
- WH – White
- BL – Black
- GA – Gold anodised
- SA – Silver anodised

Classification

For the purpose of DHF TS 02:2009 specification, door viewers are classified according to the standard seven character classification system used for CEN hardware standards, plus an additional box for length adjustment.

The classification categories are:

1. Category of use - No requirement in this category
2. Durability - No requirement in this category
3. Door mass – No requirement in this category
4. Suitability for use on fire/smoke doors. Three grades are identified.
5. Safety - No requirement in this category
6. Corrosion resistance - Five grades are identified mirroring the grades in BS EN 1670:2007
7. Security - Three grades are identified.
8. Length adjustment range – The actual range limits are specified.

For the purposes of this evaluation, the viewers were evaluated to all grades except that for suitability for fire doors (box 4).

Test Results

Corrosion Resistance

The product was be subjected to a neutral salt spray test as detailed in BS EN 1670:2007 for 240 hours (grade 4).

Sample	Comments	Grade
PVD (1)	Lacquer removed on cover to 20% area. Red corrosion on tube to 15% area (non significant surface)	4
PVD (2)	Lacquer removed on cover to 90% area.	4
CH	No concerns	4
WH	Red staining on internal eyepiece. Paint removed on cover to 15% area.	4
BL	No concerns	4
GA	Discoloration to 1.5mm dia. on outer surface. Discoloration to 2mm dia. on internal surface. Discoloration on tube to 15% area (non significant surface)	3
SA	Discoloration to 3mm dia. on outer surface.	3

Suitability for use on fire/smoke doors

These products were not evaluated for use on fire/smoke doors.

Box 4 – Grade 0

Security

Angle of vision

The door viewer was mounted, in accordance with the manufacturer's instructions, to a 45mm thick (+/-1mm) wooden block which, in turn, was mounted perpendicular to a protractor. Whilst looking through the door viewer, a point source of light was moved into view and the angle at which it first appeared (measured from a datum perpendicular to the "door" face) was noted. The test was repeated from the 180° opposite position and the two readings were added together to give an average "viewing angle" for the cone of vision.

Sample	LH Reading	RH Reading	Angle of Vision	Grade
CI*	65°	66°	131°	1
CVPL*	70°	71°	141°	2

Visual clarity

The door viewer was mounted in a suitable test-rig in which the viewer was held perpendicular to a sheet of text at a distance of 150 mm. Using normal or corrected normal vision, in good light, attempts were made to read text in progressively smaller

point sizes and the smallest point size that could be read was noted. (The font used was Ariel Black – regular, printed using Microsoft Word).

Sample	Reading	Grade
CI*	8pt	3
CVPL*	12pt	2

Resistance to misting up

The door viewer was mounted, in accordance with the manufacturer's instructions, to a 45mm thick (+/-1mm) painted wooden block – representing part of a typical external door to a dwelling. This, in turn, was mounted in a test-rig in which the viewer was held perpendicular to a sheet of text at a distance of 150 mm. Using normal or corrected normal vision, in good light, attempts were then made to read text in progressively reducing font sizes and the smallest point size that could be read was noted. The wooden block was then stood upright in an environmental chamber and subjected to 72 hours of cyclic humidity to BS 3900-F2:1973. Immediately after the humidity test, the readability test was repeated by the same person.

Sample	Initial Reading	Reading 1	Reading 2	Grade
CI*	8pt	No visibility	14pt	1
CVPL*	12pt	No visibility	No visibility	1

Ability to clear after misting up

Following the humidity test, the door viewer (still in the wooden block) was allowed to dry out for 72 hours at 30° C, after which the readability test was repeated by the same person who carried out the initial test.

Sample	Initial Reading	Reading 1	Reading 2	Grade
CI*	8pt	8pt	8pt	3
CVPL*	12pt	12pt	12pt	3

Note: clarity had returned after 48 hours at 30° C.

Length adjustment range

The door viewer was screwed up to its shortest length and the distance between the mounting flanges noted. It was then unscrewed so that there was a full turn of engagement on all threaded connections and the distance between mounting flanges was again noted.

Sample	Minimum Length	Maximum Length	Grade
CIL*	30.6mm	56.2mm	31/56
CIC*	21.2mm	34.4mm	22/34
CVPL*	33.0mm	55.8mm	33/55

Marking

DHF TS 02 states: the following information shall be quoted on the labeling, packaging or literature:

1. manufacturer's name or trademark, or other means of positive identification
2. clear product identification
3. classification according to clause 4 of this standard
4. number and date of this standard

The viewers' packaging conformed to items 1 and 2. Items 3 and 4 were not stated, as the viewers had not previously been evaluated to this standard at the time of test.

Summary

When evaluated to DHF TS 02: 2009 the following results were obtained for the UAP Door Viewers.

	1	2	3	4	5	6	7	8
	Category of use	Durability	Door mass	Suitability for use on fire/ smoke doors	Safety	Corrosion resistance	Security	Length adjustment range
CILPVD	-	-	-	0	-	4	1	31/56
CILCH	-	-	-	0	-	4	1	31/56
CICWH	-	-	-	0	-	4	1	22/34
CICBL	-	-	-	0	-	4	1	22/34
CILGA	-	-	-	0	-	3	1	31/56
CILSA	-	-	-	0	-	3	1	31/56
CVPLPVD	-	-	-	0	-	4	1	33/55
CVPLWH	-	-	-	0	-	4	1	33/55



Report authorised by:

Dr Martin White
Director

Date: 25 April 2009

REPORT ENDS

Appendix A – Photographs



Sample CILPVD



Sample CICBL



Sample CVPLWH



CILPVD – Post Corrosion Grade 4



CILCH – Post Corrosion Grade 4



CICWH – Post Corrosion Grade 4



CICBL – Post Corrosion Grade 4



CILGA – Post Corrosion Grade 4



CILSA – Post Corrosion Grade 4