LNE
Le progrès, une passion à partager

LABORATOIRE DE TRAPPES
29 avenue Roger Hennequin – 78197 Trappes Cedex
Tél. : 01 30 69 10 00 – Fax : 01 30 69 12 34

CLASSIFICATION REPORT

(free translation of French test report N° H111220 - CEMATE/2)
established according to the article 5 of the Department State Order dated on 21 november 2002.

VALIDITY 5 YEARS FROM 8 February 2008

N° H111220 - CEMATE/5

And appendix of 4 pages

Material submitted by : MACTAC FRANCE
16 avenue Arago
BP 62
91422 MORANGIS CEDEX
FRANCE

Commercial trademark : MACAL 9800

Brief description :

Global composition : Adhesive film made up of a PVC polymer and a acrylic resin adhesive.

End-use : Internal and external communication, on various rigid support, in public places.

Mass : (128 ± 10 %) g/m^2

Thickness : (95 ± 10 %) µm

Colour : Various.

Test report : **N° H111220 - CEMATE/5 dated on 03 November 2008**

Type of tests : Heat radiation test.

Classification : **M1** **ADHESIVE ON ALUMINIUM STEEL OF 2 mm**

Durability of classification (appendix 22) : **UNLIMITED A PRIORI**

In view of criteria resulting from the tests described in the appendiced Test Report **N° H111220 - CEMATE/5**

The indicated classification prejudges in no way the conformity of the materials commercialized to the samples submitted to the tests and can in no way be considered as a certificate of qualification.
This is not a product certification according to the L115-27 article of the consumption code and to the law dated on 3rd june 1994.

Trappes, 03 November 2008

The Head of the Fire Behaviour Division

Alain SAINRAT

Laboratoire national de métrologie et d'essais • LNE

The Responsible for Test

Emilie COLIN

cofrac ESSAIS
Accréditation
N° 1-0606
Portée disponible
sur www.cofrac.fr

APPENDIX PAGE 1

TEST REPORT

(free translation of French test report N° H111220 - CEMATE/2)
Established according to the article 5 of the department State Order dated on 21 november 2002.

VALIDITY 5 YEARS FROM 8 February 2008

N° H111220 - CEMATE/5

And appendix of 3 pages

1. PURPOSE OF TEST

The purpose of tests to which this report relates is to determine the classification of materials, in accordance with the stipulations in the order from the Ministère de l'Intérieur, dated 28 August, 1991 relating to their reaction to fire.

2. SAMPLES SUBMITTED

Test sponsor	:	MACTAC FRANCE
Date of order	:	Email of 27/10/2008
Producer	:	MACTAC EUROPE S.A. Boulevard Kennedy 7060 SOIGNIES BELGIUM
Distributor	:	
Commercial trademark and reference	:	MACAL 9800
Characteristics attested by sponsor	:	
Global Composition	:	Adhesive film made up of a PVC polymer and a acrylic resin adhesive.
Mass	:	(128 ± 10 %) g/m^2
Thickness	:	(95 ± 10 %) µm
Colours	:	Various
. Characteristics observed by LNE	:	Conform to those attested by sponsor
Global composition		Not controlled
. DSC's keyword	:	Sheet, film

3. TEST PROCEDURES AND RESULTS

Appendix page 2	:	Test procedures, conditioning, classification, ageing.
Appendix page 3	:	Results.
Appendix page 4	:	Observations about tests, conclusion and classification.

APPENDIX PAGE 2

TEST PROCEDURES AND CLASSIFICATION ON TENSE MATERIALS OR MADE SUCH (STICKED) OF ALL THICKNESS AND FLEXIBLE MATERIALS WITH THICKNESS HIGHER THAN 5 MM (EXCEPT FILTERING MEDIA)

1. MAIN TEST(S)

HEAT RADIATION TESTS (APPENDICES 26 to 42)

These test consist in submitting the samples, in clearly defined conditions, to the actions of a radiating heat source and producing :

- ignition of the released gases, if it occurs,
- flame propagation.

The sample (30x40 cm) inclined at 45° is submitted to a clearly defined radiation, emitted by an electric radiator, whose surface is 30 mm below the surface of the test sample. The released gases pass in contact with gas ignitors located on either side of the test sample. The duration of the test is 20 minutes.

SPREAD OF FLAME TEST:

The standardized sample is set vertically and the propane burner flame is applied on its botton edge.
The speed of spread of flame is measured between 2 marks on a distance of 25 cm along the test sample.
In case of no spreading, time of flame persistence, destroyed area and fallinf falming droplets are observed.

DROP TEST

The sample is set horinzontally on a grid , under the heat radiant source, whose surface is placed 30 mm above the sample.
During 5 minutes, the heat source is moved from the sample in case of ignition, and re-applied when it extinguishes .
During the 5 last minutes, the heat source stays above the samples. Ignition of cotton, set 30 cm beneath the gris, by flaming or non flaming droplets is considered

2. SAMPLES CONDITIONING

The samples submitted with normal dimensions are kept in a conditioned enclosure (23 ± 2 °C and 50 ± 5 % RH) until their mass has stabilized. The mass is considered as stabilized when 2 succesives weighings over 24 h do not differ more than 0,1 % or 0,1g.

3. CLASSIFICATION OF MATERIALS (APPENDICES 70 to 87)

It is established according to the above test. Combustible materials are classified M1, M2, M3, M4.
Only those materials classified M1 without no effective ignition during the heat radiant test can claim to the M0 classification.

4. DURABILITY (APPENDIX 22)

ACCELERATED AGEING (APPENDIX 22, Article 10)

The samples are submitted during 2 monthes in an alternative conditioned enclosure and kept in relative humidity variations inclued between 15% and 90 % (the duration of each humidity period is 4 weeks).

INJECTION-EXTRACTION (APPENDIX 22, Article 27 and 30)

The sample settled on its substract is submitted 20 times to the injection-extraction applicator, before conditioning (§3 above).

The test report is following next page

APPENDIX PAGE 3

4. TESTS RESULTS

Heat radiation tests

	Sample 1 Yellow	Sample 2 Noir	Sample 3 Red	Sample 4 Yellow	
Times of 1st ignition exposed side (ti1)	-	-	-	-	
Times of 1st ignition unexposed side (ti2)	-	-	-	-	
height's flame sum $\sum H$ (cm)	0	0	0	0	
effective burning period sum $\sum \Delta T$	0	0	0	0	
$q = \frac{100.\sum H}{ti\sqrt{\sum \Delta T}}$	0	0	0	0	Average = 0
Nonflaming drops	No	No	No	No	
Flaming drops	No	No	No	No	

The test report is following next page

APPENDIX PAGE 4

5. OBSERVATIONS ABOUT TESTS

Nothing.

Receipt of samples : 07/01/2008

End of tests : 25/01/2008

6. CONCLUSION AND CLASSIFICATION

In view of the results, the material with the caracteristics described in the first page of this test report has the classification

M1 **ADHESIVE ON ALUMINIUM STEEL OF 2 mm**

7. CLASSIFICATION DURABILITY

Unlimited *a priori*

Trappes, 03 November 2008

The Head of the Fire Behaviour Division

Alain SAINRAT

Laboratoire national de métrologie et d'essais LNE

The Responsible for Test

Emilie COLIN

Attention is attracted to the fact that the results obtained with the samples described in the present test report are not generalizable without justification of the representativity of samples and tests.