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TEST REPORT

TSL No. R17779

**Summary of test data for
Elastosil R770/50"and
"Elastosil R770/75".**

**(BS6853: 1999: Code of
Practice for fire precautions
in the design and
construction of passenger
carrying trains.**

**SUMMARY OF TEST DATA FOR ELASTOSIL R770/50" AND "ELASTOSIL R770/75".
(BS6853: 1999: Code of Practice for fire precautions in the design and
construction of passenger carrying trains.**



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**SUMMARY OF TEST DATA FOR ELASTOSIL R770/50"AND "ELASTOSIL R770/75"
 (BS6853: 1999: Code of Practice for fire precautions in the design and
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**SUMMARY OF TEST DATA FOR ELASTOSIL R770/50" AND "ELASTOSIL R770/75"
(BS6853: 1999: Code of Practice for fire precautions in the design and
construction of passenger carrying trains.**



1. INTRODUCTION

The purpose of this evaluation is to summarise whether the materials referenced "Elastosil 770/50" and "Elastosil 770/75" comply with Category Ia 'Exterior & Interior minor use' requirements of the BS6853: 1999 'Code of Practice for fire precautions in the design and construction of passenger carrying trains'.

Transfire Services Limited Report Numbers R17770, R17772 and R17773 refers.

2. MATERIAL DESCRIPTION

The description of the material given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

Transfire Services Sample reference	Material	Client's sample reference
TSL0029/1	Grey, 3mm thick, silicon rubber compound, referenced "Elastosil R770/50", supplied by Wacker-Chemie GmbH, Germany	ELASTOSIL R770/50
TSL0029/2	White, 3.4mm thick, silicon rubber compound, referenced "Elastosil R770/75", supplied by Wacker-Chemie GmbH, Germany	ELASTOSIL R770/75

The materials were supplied by the sponsor of the test on 16th July 2003 and Transfire Services Ltd was not involved in any selection or sampling procedure.

3. FIRE PERFORMANCE

3.1 SMOKE EMISSION

3.1.1 DATA

The "Elastosil R770/50" and "Elastosil R770/75" materials have previously been tested under the conditions of BS6853: 1999: D8.3 – "Code of Practice for Fire Precautions in the design and construction of passenger carrying trains".

Transfire Services Limited Report Number R17773 refers.

**SUMMARY OF TEST DATA FOR ELASTOSIL R770/50" AND "ELASTOSIL R770/75"
(BS6853: 1999: Code of Practice for fire precautions in the design and
construction of passenger carrying trains.**



The results obtained were as follows:

Sample Reference	Test Mass (g)	Test	Result Ao(abs) m ² /g
TSL0029/1	42.53	1	0.00717
	46.94	2	0.00831
Average			0.00776
Standard Deviation			0.00084

Sample Reference	Test Mass (g)	Test	Result Ao(abs) m ² /g
TSL0029/2	47.92	1	0.00814
	49.71	2	0.00925
Average			0.00870
Standard Deviation			0.00079

3.1.2 SUMMARY

The recommended compliance criterion for Category Ia 'Interior minor use materials' and 'Exterior minor use materials' is an Ao value of less than 0.017 and 0.029 respectively. The materials referenced "Elastosil R770/50" and "Elastosil R770/75", therefore meet the criterion.

3.2 TOXIC FUME EMISSION

3.2.1 DATA

The "Elastosil R770/50" and "Elastosil R770/75" materials have previously been tested for potential toxic fume emission, in accordance with BS6853: 1999: Annex B. — "Code of Practice for Fire Precautions in the design and construction of passenger carrying trains", using NFX 70-100: 2001.

Transfire Services Limited Report R17770 refers.

The results obtained were as follows:

Elastosil R770/50: **R Value = 0.087**
Elastosil R770/75: **R Value = 0.045**

**SUMMARY OF TEST DATA FOR ELASTOSIL R770/50" AND "ELASTOSIL R770/75".
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3.2.2 SUMMERY

The recommended compliance criterion for Category Ia 'Interior minor use materials of mass 100g to 500g' and 'Exterior minor use materials of mass 400g to 2000g' is an R value of <1.0 and <1.7 respectively. The materials referenced "Elastosil R770/50" and "Elastosil R770/75", therefore meet the criterion.

3.3 FLAMMABILITY

3.3.1 DATA

The "Elastosil R770/50" and "Elastosil R770/75" materials have previously been tested under the conditions of BS EN ISO 4589-3: 1996: Part 3 - Elevated temperature test.

Transfire Services Limited Report No. R17772 refers.

The result obtained was as follows:

Sample reference	Result (°C)	Requirement (°C)
TSL0029/1	352	>300
TSL0029/2	354	>300

3.3.1 SUMMERY

The recommended compliance criterion for Category Ia 'Interior minor use materials of mass 100g to 500g' and 'Exterior minor use materials of mass 400g to 2000g' is a Flammability Temperature Index value of >300. The materials referenced "Elastosil R770/50" and "Elastosil R770/75", therefore meet the criterion.

4. CONCLUSION

The materials referenced "Elastosil R770/50" and "Elastosil R770/75" meet the smoke emission, toxic fume emission and flammability criteria for category Ia 'Interior minor use materials of mass 100g to 500g' and 'Exterior minor use materials of mass 400g to 2000g' of the BS6853: 1999 'Code of Practice for fire precautions in the design and construction of passenger carrying trains'.