

Mr. B.C Han

LG Chemical Ltd.

HI-MACS Divion Strategy Team
LG Twin Tower, Yeouido-dong, Yeongdeungpo-gu, Seoul, KoreaDate 29 December 2008
Your ref
Our ref SEO/SIC/DHK/1229001

Dear Sirs,

Approval of Fire Resisting Material - Type "HI-MACS FR SOLID"

In view of satisfactory nature of the products and your Type approval documents to the subject was granted.

We enclosed herewith the original of Type Approval Certificate No. SAS F080280 and List entry.

Please you are advised that Type Approval is valid only as long as the components are consistent with the data submitted, and the Quality Control routines, which have been disclosed, remain in operation.

You are advised that LR's Type Approval dose not necessarily preclude inspection, survey of design appraisal procedures required by LR Rules for products to be installed in LR classed installations.

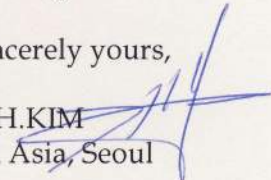
Furthermore, you ought to inform of any changes as follows to LR;

- To cover additional types that is similar to those products already approved.
- To alter the specified standard(s) additionally applied to the approved products.
- To include new or additional place(s) of production.
- To change any of design and/or construction.
- To change any of the addresses stipulated on the certificate.

In addition, any reference to approval in trade literature of advertisements should be referred to this office in the first instance for approval of the wording.

Lloyd's Register of Shipping and me wish you all ways your prosperity, and expressed our best regards our honour to have a chance to serve you.

Sincerely yours,


D.H.KIM
LR Asia, Seoul

Enclosed: Certificates Original 1 and Copy 1


CERTIFICATE OF FIRE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	LG Chem Co. Ltd (Cheongju Plant)
Address	LG Chemical Cheongju Factory Songjeong-dong Heungdeok-gu, Cheongju-si Chungbuk Korea 361-721
Type	MATERIAL HAVING LOW FLAME SPREAD CHARACTERISTICS & NOT CAPABLE OF PRODUCING EXCESSIVE QUANTITIES OF SMOKE & TOXIC PRODUCTS OF COMBUSTION
Description	Fire Resisting Material - Type: "HI-MACS FR SOLID" decorative covering product Nos. S705, S706, S728, S729 & S801
Specified Standard	IMO Fire Test Procedures Code, Annex 1, Part 5 and Annex 2

**The attached Design Appraisal Document forms part of this certificate.
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.**

Date of issue	10 December 2008	Expiry date	9 December 2013
Certificate No.	SAS F080280	Signed	 Seoul
Sheet No	1 of 2	Name	M. Farrier Surveyor to Lloyd's Register EMEA A Member of the Lloyd's Register Group

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Page 2 of 2
Document number SAS F080280
Issue number 1

DESIGN APPRAISAL DOCUMENT

Date 10 December 2008	Quote this reference on all future communications LDSS/PAS/FITA/MF
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F080280

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

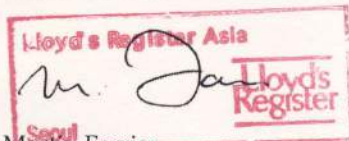
Fire Insurers Laboratories of Korea (FILK), Kyunggi-Do, Korea, Test Report No. 2008-0317, dated June 2008.

CONDITIONS OF CERTIFICATION

1. When bonded to a non-combustible substrate with an approved adhesive.
2. HI-MACS FR-Solid decorative covering for furniture and bulkheads applied to a maximum thickness of 12mm.
3. Smoke and toxicity criteria is satisfied by meeting the total heat release (Q_t) and peak heat release rate (q_p) as stated in IMO Fire Test Procedures Code, Annex 2, Section 2.2.
4. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.

PLACE OF PRODUCTION

LG CHEM Ltd (Cheongju Plant)
Hi-MACS Production Team
LG Chemical Cheongju Factory
Songjeong-dong
Heungdeok-gu, Cheongju-si
Chungbuk
Korea 361-721



Martin Farrier
Lead Specialist
Product Approval Services
London Design Support Services
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).

CERTIFICATE OF FIRE APPROVAL


This is to certify that

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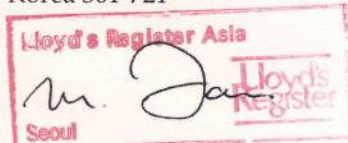
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CONDITIONS OF CERTIFICATION

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Martin Farrier

Lead Specialist

Product Approval Services

London Design Support Services

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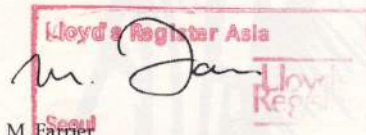
EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that :

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), specified as a "notified body" under the terms of The Merchant Shipping (Marine Equipment) Regulations S.I. 1999 No. 1957, did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Fire protection requirements of Marine Equipment Directive (MED) 96/98/EC as modified by Commission Directives 98/85/EC, 2001/53/EC, 2002/75/EC and 2002/84/EC subject to any conditions in the Design Appraisal Document attached hereto.

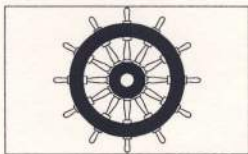
Manufacturer	LG Chem Co. Ltd (Cheongju Plant)
Address	LG Chemical Cheongju Factory Songjeong-dong Heungdeok-gu, Cheongju-si Chungbuk Korea 361-721
Annex A1 Item	A.1/3.18a SURFACE MATERIALS & FLOOR COVERINGS WITH LOW FLAME-SPREAD CHARACTERISTICS - DECORATIVE VENEERS
USCG Category Number	164.112 - SURFACE MATERIALS AND FLOOR COVERINGS WITH LOW FLAME-SPREAD CHARACTERISTICS (Interior Finish)
Type	MATERIAL HAVING LOW FLAME SPREAD CHARACTERISTICS & NOT CAPABLE OF PRODUCING EXCESSIVE QUANTITIES OF SMOKE & TOXIC PRODUCTS OF COMBUSTION
Description	Fire Resisting Material - Type: "HI-MACS FR SOLID" decorative covering product Nos. S705, S706, S728, S729 & S801
Specified Standard	IMO Fire Test Procedures Code, Annex 1, Part 5 and Annex 2

The attached Design Appraisal Document (schedule) forms part of this certificate.
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Date of issue	10 December 2008	Expiry date	9 December 2013
Certificate No.	MED 0850337	Signed	
Sheet No	1 of 2	Name	M. Farmer For and on behalf of Lloyd's Register Verification LRV EC Distinguishing No. 0038

Note:

This certificate is not valid for equipment; the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.



0038/yy

Subject to compliance with the conditions in the attached Design Appraisal Document (schedule), which forms part of this certificate, and those of Articles 10.1(i) and 11 of the Directive, the Manufacturer is allowed to affix the "Mark of Conformity" to the Product described herein.

yy = Last two digits of year mark affixed.

This product has been assigned a U.S. Coast Guard Module B number:

USCG Module B number: 164.112/EC0038

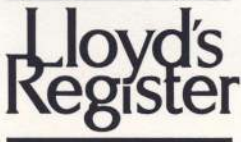
USCG-EU MRA

to note type approval to Module B only as it pertains to obtaining U. S. Coast Guard approval as allowed by the "Corrigendum to Council Decision 2004/425/EC of 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment."

This certificate is issued under the authority of the MCA.

Lloyd's Register Verification is the business name of Lloyd's Register Verification Limited, a member of the Lloyd's Register Group. Registration number 4929226. Registered office 71 Fenchurch Street, London EC3M 4BS, England.

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



Lloyd's Register Verification Limited

71 Fenchurch Street, London, EC3M 4BS
Telephone 020 7423 2940 Fax 020 7397 4246
Email dcg-stat@lr.org

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Document number	MED 0850337
Issue number	1

DESIGN APPRAISAL DOCUMENT

Date 10 December 2008	Quote this reference on all future communications LDSS/PAS/FITA/MF
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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No.MED 0850337

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

APPROVAL DOCUMENTATION

Fire Insurers Laboratories of Korea (FILK), Kyunggi-Do, Korea, Test Report No. 2008-0317, dated June 2008.

CONDITIONS OF CERTIFICATION

- When bonded to a non-combustible substrate with an approved adhesive.
- HI-MACS FR-Solid decorative covering for furniture and bulkheads applied to a maximum thickness of 12mm.
- Smoke and toxicity criteria is satisfied by meeting the total heat release (Q_t) and peak heat release rate (q_p) as stated in IMO Fire Test Procedures Code, Annex 2, Section 2.2.
- Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E), a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place.
- This product has been assigned a U.S. Coast Guard Module B number USCG Approval Category 164.112/EC0038 to note type approval to Module B only as it pertains to obtaining U. S. Coast Guard approval as allowed by the "Corrigendum to Council Decision 2004/425/EC of 21 April 2004 on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment".

In those instances where the Notified Body conducting the conformity assessment in accordance with either Module D, E or F of the Marine Equipment Directive is not Lloyd's Register Verification Ltd., such Notified Body would use the above U.S. Coast Guard Module B number to provide the manufacturer with the U.S. Coast Guard approval number by noting it on the Certificate of Conformity, thereby authorizing the manufacturer to mark the product accordingly.

Note: For products placed on board U.S. flagged ships there is no declaration of conformity required to meet U.S. Coast Guard requirements.

- Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place.

PLACE OF PRODUCTION

LG CHEM Ltd (Cheongju Plant)
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Martin Farrier
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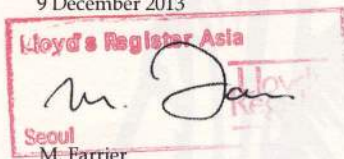
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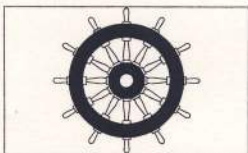
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USCG-EU MRA

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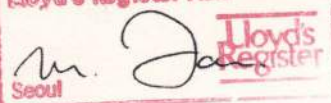
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