

مصنع سرايا السحاب للصناعات المعدنية ملف الموردين المعتمدين



تنفيذ جميل الأعمال المعدنية

تصميم وتنفيذ أعمال الألمنيوم

تصميم وتنفيذ الواجهات الزجاجية



2022



**SARAYA SAHAB FACTORY
FOR METAL INDUSTRIES**

RIYADH AL MASHAEL AREA
KINGDOM OF SAUDI ARABIA
CONTACT NUMBER: +966 50 122 2905

**IS HEREBY APPOINTED BY ALUK MIDDLE EAST AS
ALUK AUTHORIZED FABRICATOR AND INSTALLER IN
KINGDOM OF SAUDI ARABIA**

Issued: 16.06.2022



Aluk Middle East
Unit 210x PREGATCHI TOWER, Cluster L,
Jumeirah Lake Towers, Dubai, U.A.E.

mideast.aluk.com



HUECK Middle East
Aluminium Systems LLC

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72, P.O. Box 62194
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Email: middleeast@hueck.ae
Website: www.hueck.ae

Date: 09/03/2022

Ref No: HMESD-OL-0061-22

M/S. Saraya Al Sahab Factory

Attn: To Whom It May Concern

Project: North Residences Narges

Subject: Hueck System

This is to confirm that we, Hueck Middle East Aluminium Systems LLC supplied all materials for the above-mentioned project.

Hueck is recognized for its competence and technical know-how with respect to windows, doors, and curtain wall solutions.

All our systems have been tested according to relevant European-EN/ DIN standards and all certificates available in English language.

HUECK Middle East Aluminium Systems LLC



ALUMINIUM SYSTEMS
HUECK
GERMAN ENGINEERING SINCE 1814
هوك الشرق الأوسط لأنظمة الألمنيوم من ألمانيا
HUECK MIDDLE EAST
ALUMINIUM SYSTEMS LLC
PO Box 62194 Dubai UAE

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Bank: Emirates Islamic Account no 3708317314101, IBAN: AE100340003708317314101 Swift Code MEBLAEADRIQ





**AL HOWAIL GLASS FACTORY
ALHOWAIL FIRE-GARD GLASS-FIRE RESISTANT CERTIFICATE**

Customer: M/s Saraya Contracting Est.

Project: Alnarjes Commercial Building # 107691. Order 107691. Qty. 37 Pcs.

6mmThick FIRE-GARD" One Hour Fire Guard" Clear

AL HOWAIL FIRE-GARD Fire Resistant glass is a specialist architectural glass product, which in the event of fire provide an effectiarrier to smoke and hot gases up to 60 minutes depending on the framing system.

AL HOWAIL FIRE-GARD glass has been tested at Warrington Fire Research Centre in the U.K. and passed the requirements for 60 minutes integrity and 6 minutes insulation in accordance with BS 476: Part 22.

AL HOWAIL FIRE-GARD glass is a fully tempered glass and complies with BS 6206, Class "A" for safety glazing.

No AL HOWAIL Glass Industries employee, representative, or distributor of HOWAIL Glass Industries is authorized to modify this certificate.

Any inquiries should be directed to:

**AL HOWAIL GLASS FACTORY
P.O. BOX 7850, MUBARKIA DAMMAM 31472
SAUDI ARABIA**



AL WAKEEL GLASS FACTORY

P. O. Box 4208 Dammam 31491 Saudi Arabia
 Tel. No: 00966 3 8220620 Fax No: 00966 3 8211504
 E-Mail: glass@alwakeel.com



مصنع الوكيل للزجاج

صوب 4208 الدمام 31491 المملكة العربية السعودية
 تلفون 0096638220620 فاكس 0096638220620
 www.alwakeelglass.com

GLASS PERFORMANCE DATA

GLASS DESCRIPTION	VISIBLE LIGHT			SOLAR ENERGY					EUROPEAN	AMERICAN STANDARD	RELATIVE HEAT GAIN
	LT %	LR		ER %	DET %	EA %	SF	SC	WINTER K-VALUE	SUMMER U-VALUE	
		OUT %	IN %						W/m2/K	W/m2/K	W/m2
12 mm Guardian Clear Tempered	86	08	08	07	72	21	0.78	0.90	-	5.60	612

LT Light Transmission

ER Energy Reflectance

DET Direct Energy Transmitted

RHG Relative Heat Gain

LR Light Reflectance

EA Energy Absorption

SF Solar Factor

SC Shading Co-efficient

Light Characteristics:

European Standards (EN 410)
 Standard Illuminant D65
 > Reference Illuminant between 380 and 780 nm used to calculate the light properties.

Light Transmission (LT)

> Percentage of the light flux (Illuminant D65) transmitted through the glass.

Light Reflection (LR)

> Percentage of the light flux (Illuminant D65) reflected by the glass.

Other related indexes:

Shading Coefficient (SC)

> It is obtained by dividing the Solar Factor by 87, which is the Solar Factor of 3mm Clear Float Glass: SC = SF/87

U-Value

> Characterizes the heat transfer through the central part of the glazing. It is the amount of heat which is transferred through one square meter of glass surface per degree difference between external and internal temperatures.

12 mm

Incident Light: 100%

LR = 08%

Incident Solar Energy: 100%

ER = 07%

Solar Energy Reradiated Out

LT = 86%

INSIDE

DET = 72%

Solar Energy Reradiated In

DEA = 21%

Face No. 1 2 3 4

Energy Characteristics:

Direct Energy Transmission (DET)
 > Percentage of the solar radiation transmitted directly through the glass.

Energy Reflection (ER)
 > Percentage of the solar radiation reflected by the glass.

Solar Factor (SF)

> Radiation transmitted through the glass. It is the sum of the Direct Energy Transmission (DET) and the part of the Energy Absorption (EA) reradiated to the inside of the building

Relative Heat Gain (RHG)
 = SC (630) + Summer U-Value (7.8)

Energy Absorption (EA)

> Percentage of the solar radiation absorbed by the glass. The absorbed energy is then reradiated to the outside and the inside at different rates depending on the characteristics of the glass, wind speed, internal & external temperatures.



Project Name: Al Kharejje Tower

Performed by: Nelson M. dela Cruz

Reviewed by: Engr. Ahmed Baker