



MS CERT

Certificate Of Registration QUALITY MANAGEMENT SYSTEM

This is to Certify that the Quality Management System
of

FU SHENG ACRYLIC CO., LTD.

Address:

36A, Hamlet 1, An Phu Village, Thuan An District, Binh Duong Province, Vietnam

has been assessed and found to comply with the requirements of:

ISO 9001:2008

(Quality Management System)

Clause 7 permissible Exclusions: Nil

Scope of Certification:

Manufacture and Export Cast Acrylic Sheet

Sector Code: (ANZSIC CODE: 2533)

Certificate Number: VIN/QMS/0002

Issue no.: 01

Date of approval : 30.04.2014

Revision no: nil

Valid until

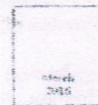
Revision date : nil

Original Certification Date: 30.04.2014



Surveillance Audit 1st Year

S. Mai
Director



Surveillance Audit 2nd year



MS CERT

IAS-ANZ



ACC.No M4161009HK



MS CERTIFICATION SERVICES PVT. LTD.

www.ms-certification.net

The validity of this certificate can be verified at www.ias-anz.org or

www.ms-certification.net

The Certificate is Valid Only if the Annual Surveillance Mark is Signed by Auditor on Original.

F60.rev.06

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XUẤT
NG MẠI
CH VU
N BANG
- TP. HO CHI MINH *

Characteristics of Acrylic Sheet

1. Light in weight and high transparency.
2. Beautiful in colors.
3. High electric insulating properties.
4. Easily extra worked.
5. Good breakage, chemical, weather and co resistance.

Pay Special attention with Usage of Acrylic Sheets

Temperature: Acrylic sheets, melts softened with heating at 100°C or over. To prevent from becoming soft, please keep units beyond the place over 100°C.

Breakage: The hardness surface of acrylic sheet is equal to aluminum, thus be careful on surface protection during process. If there are scratches on the surface of the acrylic sheets, polish them with cleaner used for brass that can recover its brilliant surface.

Cleaning: Due to acrylic sheet with stick electricity, clean the surface with soft and dry cloth wet 1% soap water when there are dust on the surface.

Expansion: The coefficient of heat expansion is larger and its elasticity is about nine times of other mental materials. Remain enough space for its contractility towards changeful temperature while you install and fix acrylic sheets steady.

Special Instruction under Design and Construction

1. Reserve enough space for contractility, the elasticity of cast acrylic sheet per meter is as following, according to the temperature.

(A) After finishing processed acrylic novelties at 10°C, the temperature raises to 50°C

$$1000 \times 8 \times 10^{-5} \times (50 - 10) = 3.2 \text{ m/m (elongation)}$$

(B) After finishing processed acrylic novelties at 30°C, the temperature falls to -10°C

$$1000 \times 6 \times 10^{-5} \times (30 - 10) = 2.4 \text{ m/m (shrinkage)}$$

You can consult general settlements to prevent from troubles as following:

- 1/ Reserve the frame for contractility.
- 2/ Making elliptical hole with screw.
- 3/ Cushion material as elastic as rubber.
- 4/ Making acrylic novelties into unprominent shape.
- 5/ Using form to increase the cross-sectional coefficient avoiding interior stress.

2. Prevent Transformation:

* Forming acrylic sheets into wave, wrap and trough to increase cross-sectional coefficient in order to prevent transformation from the weight of acrylic sheet itself and loading.

* Increasing thickness of acrylic sheet as larger length and dimension.

* Counting thickness, tension tolerance and bending strength of acrylic sheet to endure wind pressure on the surface.

Chemical Features of Acrylic Sheet

Sulfuric Acid	60°C	Stability to 60°C
Hydrochloric Acid	60°C	Stability to 30°C
Nitric Acid	60°C	Stability to 20°C
Caustic Soda	60°C	Stability to 50°C
Aqueous Ammonia	60°C	Stability to 18°C
Acetic Acid	60°C	dissolvable
Chlorine Water		Change to dark color
Iodine Tincture		Easily colorate

Resistant Properties to the Solvents

Corrosion resistant at room temperature
Hexane, octane, formaldehyde 40%, methanol, ethanol, glycol, petroleum (contained a little aromatic groups).

Expansion or track at room temperature:

Chloroform, benzene, toluene, xylene, acetylene dichloride, acetone, ethyl acetate.

Fu Sheng Co., Ltd tolerance permission of Cast Acrylic Sheet

Size (cm)	100x200 up to 122x244		122x244 up to 185x251	
Percentage Thickness	mm	%	mm	%
1.5	± 0.3	20	-	-
2	± 0.3	15	-	-
2.5	± 0.3	12	-	-
3	± 0.4	12	± 0.55	18
4	± 0.4	10	± 0.5	12.5
4.5	± 0.5	10	± 0.6	13
5	± 0.5	10	± 0.6	12
6	± 0.6	10	± 0.7	12
8	± 0.8	10	± 0.9	11
10	± 1.0	10	± 1.1	11
12	± 1.0	8	± 1.0	8
13	± 1.0	8	± 1.0	8
15	± 1.2	8	± 1.2	8
16	± 1.3	8	± 1.3	8
18	± 1.3	7	± 1.3	7
20	± 1.3	7	± 1.3	7
25	± 1.3	5	± 1.3	4
30	± 1.5	5	± 1.5	
35	± 1.9	5	± 1.9	
40	± 2.2	5	± 2.2	
50	± 2.5	5	± 2.5	

Fu Sheng Co., Ltd on length and Width of Cast Acrylic Sheet

Length or Width mm	Tolerance mm
Up to 1.000	+3 0
From 1.001 to 2.000	+6 0
From 2.001 to 3.000	+9 0
3.000 over	+0.3m/m 0

Classification of Defects

Classification	Surface Defects	Inclusion Defects
Negligible	Less than 1 mm ²	Less than 1 mm ²
Acceptable	1 to 3 mm ²	1 to 3 mm ²

Physical Features of Acrylic Sheet

Specific gravity	1.19
Hardness	M-100
Absorptive of water (24hr)	0.3%
Tension	
Coefficient of rupture	700 kg/cm ²
Coefficient of elasticity	28.000 kg/cm ²
Bending	
Coefficient of rupture	1.50 kg/cm ²
Coefficient of elasticity	28.000 kg/cm ²
Transmittance (parallel rays)	92%
(full rays)	93%
Heat distortion temperature	100°C
Coefficient of linear expansion	6x10 ⁻⁵ cm/cm°C
Ultimate temperature of continuous operation	80°C
Thermoforming ranges	140-180°C
Insulating strength	20 v/mm