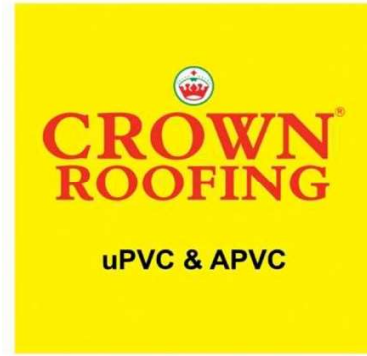




# Crown Asia Chemicals Corporation

(LISTED AT PSE ON APRIL 27, 2015)



## Company Profile

[www.crownpvc.com.ph](http://www.crownpvc.com.ph)

**As of 3rd Quarter of 2020**



## OUR HISTORY

**1989:** Crown Asia Chemicals Corporation (formerly Crown Asia Compounders Corporation) was registered with the Securities and Exchange Commission in February 1989 as a manufacturing company of plastic compounds and other plastic products.

**1990:** Commercial operations began in June 1990 with 22 employees at its plant in Guiguinto, Bulacan with a capacity of 1,800 metric tons a year.

**1994:** The Company's PVC compounds was accredited and recognized under the U.S. Underwriters Laboratories (UL) Label for exports directly and indirectly to wire and cable companies in the United States of America. In the same year, the company also started exporting its PVC compounds.

**1998:** Compounds Division was granted the ISO 9002:1994 Certification by QMS International for its commitment to maintain the highest level of quality of its PVC compounds.

**1998:** The Company started its Pipes Division. Using the latest German machinery and technology, the company expanded into the manufacture of PVC pipes under the brand "Crown Pipes" with Crownflex unplasticized PVC (uPVC) flexible electrical pipes.

**2000:** The Company introduced Crown Electrical Conduit pipes with Crown Supreme thick wall pipes and Crown Hi-Tech pipes. The company likewise started the manufacture of Crown Blue potable water pipes.

**2002:** Crown Sanitary pipes were produced with the distinction of having the built-in UV Protection for superior and longer-lasting drain-waste-vent (DWV) pipes.

**2003:** The Company expanded the application of its PVC compounds for use in packaging, IC tubes, films and bottles, doors and window profiles.

**2006:** The Company started manufacturing telecom and pressure main pipes, and introduced HDPE pipes.

**2009:** The Pipes Division was awarded its ISO 9001:2000 Certification from Certification International on June 26, 2009 for operating a quality management system in the manufacture and distribution of uPVC potable water, electrical, sanitary, and multipurpose, pressure main pipes and fittings.

**2010:** Its Compound Division received its ISO 9001:2008 Certification on April 7, 2010 for operating a quality management system in the manufacture and distribution of thermoplastic compounds.

**2010:** Crown Pipes updated its certification from ISO 9001:2000 to ISO 9001:2008, and the certificate for the updated certification was issued on July 16, 2010.

The company has two operating divisions, namely the Compounds Division and the Pipes Group. The Pipes Group is set to expand by launching its second division for the manufacture of PP-R and HDPE pipes.

**2014:** On its 25th year, Crown Asia Chemicals Corporation has established itself into one of the leading manufacturer of thermoplastic compounds supplying both local and export markets. It has also established the "Crown Pipes" brand as a trusted supplier of world class quality pipes to the building and construction, telecommunications and infrastructure projects in the Philippines.

**2015:** On April 27, 2015, Crown Asia Chemicals Corporation was publicly listed in the Philippine Stock Exchange.

On August 2015, Crown Asia Chemicals Corporation started to manufacture PPR and HDPE Pipes & Fittings.

**2016:** On January 2016, Compounds Division expanded its production capacity by 1,500 MTPY.

On February 2016, Pipes Division launched its new ENDURO product line.

**2017:** Production of the company's PVC Roofing commenced on October 2017 and started supplying projects in December 2017.

**2018:** Financial Times Top 1000 High Growth Companies in Asia Pacific.

Crown Asia Chemicals Corporation acquired the ISO 9001:2015 Certification for its Compounds Division on March 19, 2018 and for Pipes Division on July 9, 2018.

Sharia Compliant Listed Company

**2019:** Supplied major infrastructure projects.

Initially introduced Crown Septic-Tech in the market.

Revenues increased by 20.74%; gross profit up by 18.31%.

**2020:** Held Annual Stockholders Meeting in a virtual set up on July 9, 2020.

Ranked #170 in Forbes Asia's 'Best Under A Billion' top performing listed companies in the Asia-Pacific Region.

## CORPORATE VISION

"To be the leading and preferred manufacturer and supplier of world class and innovative thermoplastic, industrial and chemical products."

## CORPORATE MISSION

"To strive for market leadership by offering innovative thermoplastic, industrial and chemical products that meet or exceed international standards, ensuring quality, reliability, and value for money for our customers and upholding a nurturing environment for our employees, while managing the business professionally with integrity providing good return to our shareholders."

## MANILA

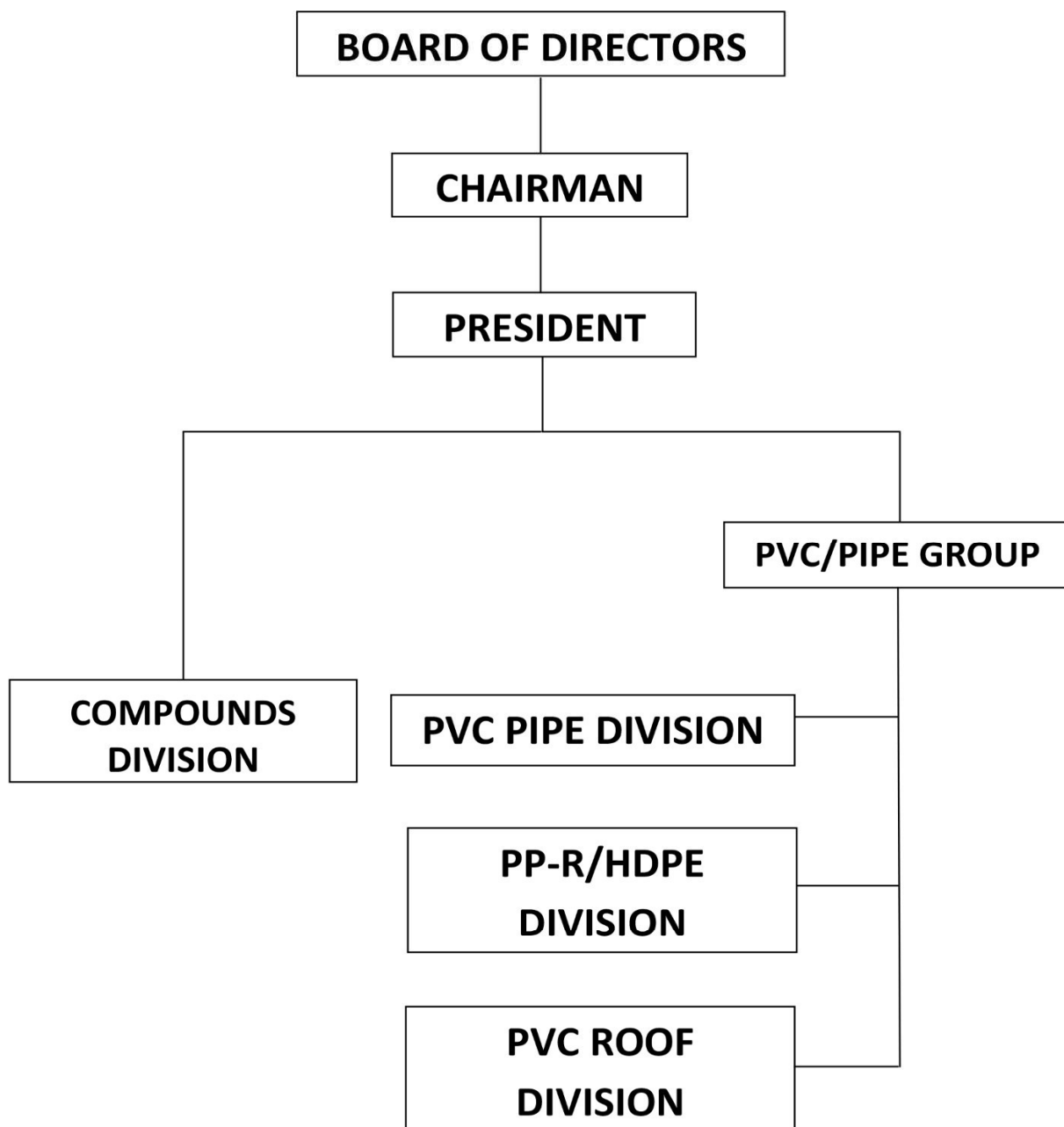
Suite 508, President Tower 81 Timog Avenue, Quezon City, Telephone: 3412-0639 to 41; 3410-1488 to 91 Fax: 3412-0642

## PRINCIPAL OFFICE and PLANT

Km. 33 McArthur Highway, Bo. Tuktukan, Guiguinto, Bulacan



## ORGANIZATIONAL STRUCTURE





## COMPANY EXECUTIVES & OFFICERS

<b>CHAIRMAN/PRESIDENT/HEAD OF PVC/PIPE GROUP</b>	-	<b>WALTER H. VILLANUEVA</b>
<b>SVP/CHIEF FINANCE OFFICER</b>	-	<b>TITA P. VILLANUEVA</b>
<b>VP-TREASURER</b>	-	<b>NICASIO T. PEREZ</b>
<b>AVP-FINANCE / COMPLIANCE OFFICER</b>	-	<b>MARIE GRACE N. DALUPAN</b>
<b>GENERAL MANAGER - PVC PIPE DIVISION</b>	-	<b>DERRICK P. VILLANUEVA</b>
<b>GENERAL MANAGER - PP-R/HDPE DIVISION</b>	-	<b>HANS JOSEPH T. PEREZ</b>
<b>GENERAL MANAGER - COMPOUNDS DIVISION</b>	-	<b>ALLAN V. VILLANUEVA</b>
<b>CORPORATE SECRETARY</b>	-	<b>ATTY. JASON C. NALUPTA</b>
<b>LEGAL COUNSEL</b>	-	<b>TAN, VENTURANZA, VALDEZ LAW OFFICES</b>
<b>EXTERNAL AUDITORS</b>	-	<b>PUNONGBAYAN &amp; ARAULLO</b>





## **PVC/PIPE GROUP**

### **OUR PRODUCTS**

<b>BRAND</b>	<b>PRODUCTS</b>	<b>APPLICATIONS</b>
<b>CROWN®FLEX® (UV PROTECTED)</b>	<b>CORRUGATED PIPES</b>	<b>FLEXIBLE INSTALLATIONS</b>
<b>CROWN®SUPREME (HIGH IMPACT/THICK WALL) PNS -14</b>	<b>PIPES, FITTINGS, JUNCTION &amp; UTILITY BOXES AND ACCESSORIES</b>	<b>ELECTRICAL INSTALLATIONS</b>
<b>CROWN®HI-TECH (THIN WALL) PNS-14</b>		
<b>CROWN®SANITARY (DSW) (UV PROTECTED) ASTM 2729D</b>	<b>PIPES &amp; FITTINGS</b>	<b>SANITARY INSTALLATIONS</b>
<b>CROWN®EXTREME (DSW) (UV PROTECTED) ASTM 2729D</b>	<b>PIPES &amp; FITTINGS</b>	<b>SANITARY INSTALLATIONS</b>
<b>CROWN®TELECOM PIPES</b>	<b>PIPES</b>	<b>GROUND CABLE INSTALLATIONS</b>
<b>CROWN®PRESSURE MAIN BLUE PNS-65</b>	<b>PIPES &amp; FITTINGS</b>	<b>HIGH-PRESSURE WATERWORKS AND IRRIGATION</b>
<b>CROWN®POTABLE BLUE</b>	<b>PIPES &amp; FITTINGS</b>	<b>POTABLE WATERWORKS AND IRRIGATION</b>
<b>CROWN®UNIVERSAL (MULTI-PUPOSE)</b>	<b>PIPES</b>	<b>FOR GENERAL CONTRACTUAL USAGE</b>
<b>CROWN®HDPE PNS- 4427</b>	<b>PIPES AND COMPRESSION FITTINGS</b>	<b>HIGH-PRESURE POTABLE OR NON- POTABLE WATERWORKS AND IRRIGATION</b>



<b>CROWN®PP-R</b>	<b>HOT &amp; COLD PIPES &amp; FITTINGS</b>	<b>WIDE RANGE OF HOT AND COLD WATER APPLIATIONS</b>
<b>CROWN®ACCESSORIES</b>	<b>FITTINGS, JUNCTION &amp; UTILITY BOXES AND ACCESSORIES</b>	<b>FOR VARIOUS APPLICATION</b>
<b>HUSKY®ELECTRICAL PRODUCTS</b>	<b>UTILITY, JUNCTION &amp; SQUARE BOXES, PIPE CLAMPS, SPLIT KNOBS AND COUPLINGS</b>	<b>ELECRTICAL FITTINGS AND ACCESSORIES</b>
<b>CROWN®ENDURO PRODUCTS</b>	<b>SANITARY PIPES &amp; FITTINGS</b>	<b>VARIOUS APPLICATIONS</b>
<b>CROWN®SEPTIC-TECH</b>	<b>SEPTIC TANK SEWAGE TREATMENT FILTER SYSTEM</b>	<b>SEWAGE SYSTEM APPLICATIONS</b>



## **PVC COMPOUNDS DIVISION**

### **OUR PRODUCTS**

- **PVC Compounds for Wires & Cables and Film & Sheets**
- **Transparent PVC Compounds for Bottles and IC Tubes**

### **MAJOR CUSTOMERS**

<b>CUSTOMER - LOCAL</b>	<b>APPLICATION</b>
1. AMERICAN WIRE & CABLE CO., INC	WIRES & CABLES
2. COLUMBIA WIRE & CABLE CORP.	WIRES & CABLES
3. ROYAL SEAL INC.	FILMS & SHEETS
4. ORION WIRE & CABLE INC.	WIRES & CABLES
5. SYCWIN COATING & WIRES INC.	WIRES & CABLES
6. PHELPS DODGE ENERGY PHILS. PRODUCT CORP.	WIRES & CABLES
7. RBV PLASTIC MFG. CORP.	BOTTLES
8. WINPLAS INDUSTRIES INC.	BOTTLES
9. PHILIPS WIRE & CABLE CORP.	WIRES & CABLES
10. PLASWEALTH PHILIPPINES CORP.	BOTTLES

<b>CUSTOMER - EXPORT</b>	<b>APPLICATION</b>
1. POWERLINE PRODUCTS LIMITED	WIRES & CABLES
2. EXITO ELECTRONICS CO. LTD. TAIWAN	WIRES & CABLES
3. TAIFINI COPPER AND CONDUCTOR, INC.	WIRES & CABLES
4. SPI SEMICON ASIA, INC.	IC TUBES
5. NANBU PHILIPPINES INC.	IC TUBES
6. GEMPHIL ELECTRONICS ASSEMBLIES INC.	WIRES & CABLES
7. CURT MANUFACTURING PHILS., INC.	WIRES & CABLES
8. CLAYMOUNT ASSEMBLIES PHILS., INC.	WIRES & CABLES
9. HAYAKAWA ELECTRONICS PHILS. INC.	WIRES & CABLES
10. PROTEK AUTOMOTIVE PRODUCTS, INC.	WIRES & CABLES



## **PVC PIPE DIVISION**

### **\*PROJECTS SUPPLIED\***

#### **AIRPORT AND OTHER INFRASTRUCTURE**

BASA AIRBASE  
CAVITE-LAGUNA EXPRESSWAY  
CLARK INTERNATIONAL AIRPORT  
LEGASPI INTERNATIONAL AIRPORT  
MRT 7  
NAIA EXPRESSWAY PHASE 1  
NAIA EXPRESSWAY PHASE 2  
NAIA EXPRESSWAY PHASE 3  
NAIA PHASE 3 REHABILITATION  
SKYWAY EXTENSION

#### **CHURCH**

CHRISTIAN BIBLE CHURCH OF THE PHILS  
IGLESIA NI CRISTO

#### **CONDOMINIUMS**

100 WEST  
27 ANNAPOLIS  
81 NEWPORT BOULEVARD CONDOMINIUM  
878 ESPAÑA TOWER  
ACACIA ESCALADES  
AMAIA SKIEZS  
AMISA PRIVATE RESIDENCES  
ASMARA  
AVIDA TOWERS  
BAY AREA SUITE CONDOMINIUM  
CAMELLA CONDO HOMES TAFT  
CASA DE SEQUOIA  
CENTURY SPIRE  
CHIME RESIDENCES  
CIRCULO VERDE  
CITYNET CENTRAL  
CYBER SIGMA  
DOVER HILL RESIDENCES  
DREAM TOWER  
EAST BEL AIR RESIDENCES  
ETON TOWER  
FAME RESIDENCES  
FILINVEST CYBERZONE  
FORTUNE HILLS

FLORIDA BLANCA, PAMPANGA  
KAWIT, CAVITE, LAGUNA  
MABALACAT, PAMPANGA  
DARAGA, ALBAY  
NORTH AVE., QUEZON CITY  
MACAPAGAL BLVD., PARAÑAQUE CITY  
TAMBO, PARAÑAQUE CITY  
STA. ANA, MANILA  
ANDREWS AVE., PASAY CITY  
METRO MANILA

TIMOG AVE., QUEZON CITY  
TONDO, MANILA

BGRY. PIO DEL PILAR, MAKATI CITY  
ANNAPOLIS, SAN JUAN CITY  
VILLAMOR AIRBASE, PASAY CITY  
ESPAÑA, MANILA  
MANGGAHAN, PASIG CITY  
AVENIDA, MANILA  
LAPU-LAPU CITY, CEBU  
E. RODRIGUEZ SR., QUEZON CITY  
ALABANG, MUNTINLUPA CITY  
MALATE, MANILA  
TAFT AVE., MANILA  
PULANG LUPA, LAS PIÑAS CITY  
POBLACION, MAKATI CITY  
ANNAPOLIS, SAN JUAN CITY  
ORTIGAS AVE., PASIG CITY  
EDSA MRT, MANDALUYONG CITY  
BGC, TAGUIG CITY  
A. MABINI, SAN JUAN CITY  
BAGONG BAYAN, QUEZON CITY  
CAINTA, RIZAL  
AYALA AVE., MAKATI CITY  
EDSA, MANDALUYONG CITY  
MACAPAGAL BLVD., PASAY CITY  
P. GOMEZ, SAN JUAN CITY





### **CONDOMINIUMS (Continuation..)**

GRAND CENTRAL RESIDENCES	SULTAN, MANDALUYONG CITY
GRAND HYATT RESIDENCES 1 & 2	BGC, TAGUIG CITY
HORIZON 101	GENERAL MAXILOM, CEBU
IMPERIUM	ORTIGAS AVE., PASIG CITY
LA BELLA RESIDENCES	BRGY. NEOGAN, TAGAYTAY CITY
LA ROSSA	MATANDANG BALARA, QUEZON CITY
LAUREANO DI TREVI TOWER 1 & 2	CHINO ROCES AVE., MAKATI CITY
MAKATI DIAMOND RESIDENCES	GALLADO ST., MAKATI CITY
MONTE CARLO TOWER	LIGAYA HIGHWAY, ANTIPOLLO CITY
NAMRIA	BGC, TAGUIG CITY
NORTH GROVE BLDG 1 & 2	ZABARTE ROAD, CALOOCAN CITY
ONE MANCHESTER PLACE	LAPU-LAPU CITY, CEBU
PACIFIC RESIDENCES	BINONDO, MANILA
PINE CREST CONDOMINIUM	BALETE DRIVE, QUEZON CITY
ROBINSONS BRIDGETOWNE TOWER	LIBIS, QUEZON CITY
ROBINSONS CHIMES	GREENHILLS, SAN JUAN CITY
ROBINSONS CYBER SIGMA	BGC, TAGUIG CITY
ROBINSONS MAGNOLIA TOWER C & D	AURORA BLVD., QUEZON CITY
ROBINSONS PEARL PLACE TOWER 1 & 2	ORTIGAS CENTER, PASIG CITY
ROBINSONS PLACE TAGUM	BRGY. HOLY SPIRIT, QUEZON CITY
ROBINSONS SAPPHIRE – THE BLOC NORTH	ORTIGAS AVE., PASIG CITY
ROBINSONS SAPPHIRE – THE BLOC WEST	ORTIGAS AVE., PASIG CITY
ROBINSONS SAPPHIRE RESIDENCES	ORTIGAS AVE., PASIG CITY
ROBINSONS SIGNA TOWER 2	SALCEDO VILL., MAKATI CITY
ROBINSONS THE RADIANCE	ROXAS BLVD., PASAY CITY
ROBINSONS THE TRION	BGC, TAGUIG CITY
ROBINSONS THE TRION TOWER 2	BGC, TAGUIG CITY
R-SQUARE RESIDENCES	MALATE, MANILA
SANTORINI	STA. LUCIA, ANTIPOLLO CITY
SHANATA	QUIRINO HIGHWAY, QUEZON CITY
SIX SENSES RESORT	MACAPAGAL BLVD., PARAÑAQUE CITY
SM KEPPEL	ORTIGAS CENTER, MANDALUYONG CITY
SM SOUTH RESIDENCES	BRGY. ALMANZA UNO, LAS PIÑAS CITY
SM SPRING RESIDENCES	BICUTAN, TAGUIG CITY
SM TREES RESIDENCES	NOVALICHES, QUEZON CITY
SM VINES RESIDENCES	NOVALICHES, QUEZON CITY
SM WIND RESIDENCES	NATIONAL HIGHWAY, TAGAYTAY CITY
SOLENAD	STA. ROSA, LAGUNA
SOLTANA NATURE RESIDENCES	LAPU-LAPU CITY, CEBU
SONRIA	ALABANG, MUNTINLUPA CITY
SOTOGRADE	KATIPUNAN AVE., QUEZON CITY
SOUTH KEY PLACE	ALABANG, MUNTINLUPA CITY
SOUTH RESIDENCES	YELLOWBELL, LAS PIÑAS CITY
SPECTRUM TOWER	ALABANG, MUNTINLUPA CITY
STA. LUCIA EAST BEL AIR	CAINTA, RIZAL



## **CONDOMINIUMS (Continuation..)**

STA. LUCIA MONTE CARLO  
STA. LUCIA NEOPOLITAN  
STA. LUCIA SPLENDIDO  
SUNRISE PARADIGM  
SUNSHINE GARDEN 2  
THE CURVE  
THE LERATO TOWER  
THE OLIVE PLACE  
THE ROCK  
THE SIGNATURE  
TOYOKO INN  
TRUMP TOWER  
URBAN DECA  
URBAN DECA HOMES CAMPVILLE  
VALLE VIEW – 36 STOREY CONDOMINIUM  
VENICE LUXURY RESIDENCES  
VICEROY EAST TOWER  
VICTORIA DE ESPANA  
VICTORIA DE MORATO  
VICTORIA THE FORT  
VINE RESIDENCES PHASE 1  
VINIA RESIDENCES  
VISTA KATIPUNAN  
VISTA RESIDENCE CONDOMINIUM  
WEST RESIDENCES  
ZETA AND EXXA TOWER

## **CONVENTION CENTER**

ILOILO CONVENTION CENTER

## **CYBERPARK TOWERS**

BPO ARANETA  
BPO NORTH ALABANG  
BPO LAS PIÑAS  
SM CLARK BPO1 AND 2

## **GOLF CLUBS**

MANILA GOLF & COUNTRY CLUB  
SUNTRUST SHERWOODS

## **HOTELS**

AMISA HOTEL  
CONRAD HOTEL  
GO HOTEL  
GO HOTEL

CAINTA, RIZAL  
FAIRVIEW, QUEZON CITY  
NASUGBU, BATANGAS  
BRGY. UGONG, PASIG CITY  
ARAYAT, MANDALUYONG CITY  
BGC, TAGUIG CITY  
MALUGAY ST., MAKATI CITY  
SHAW BLVD., MANDALUYONG CITY  
SAN JUAN CITY  
BALINTAWAK, QUEZON CITY  
KAUNLARAN VILL., MALABON CITY  
LA LOMA, QUEZON CITY  
TONDO, MANILA  
CUPANG, MUNTINLUPA CITY  
ORANBO, PASIG CITY  
BGC, TAGUIG CITY  
BGC, TAGUIG CITY  
SAMPALOC, MANILA  
T. MORATO, QUEZON CITY  
BGC, TAGUIG CITY  
NOVALICHES, QUEZON CITY  
PHILAM, QUEZON CITY  
LOYOLA HEIGHTS, QUEZON CITY  
SHAW BLVD., MANDALUYONG CITY  
WEST AVE., QUEZON CITY  
C5 AVE., QUEZON CITY

MUNDURRIO DIST., ILOILO CITY

CUBAO, QUEZON CITY  
MUNTINLUPA CITY  
ZAPOTE ROAD, LAS PIÑAS CITY  
ANGELES, PAMPANGA

FORBES PARK, MAKATI CITY  
GEN. TRIAS, CAVITE

MACTAN, CEBU CITY  
CORAL WAY, PASAY CITY  
BACLARAN, PARAÑAQUE CITY  
CUBAO, QUEZON CITY



## **HOTELS (Continuation..)**

GO HOTEL  
GRAND IMPERIAL HOTEL  
MARRIOTT HOTEL  
SAVOY HOTEL  
SEDA BGC EXPANSION  
SHANGRILA HOTEL  
SOLAIRE RESORT AND CASINO  
WIDUWS HOTEL

TIMOG AVE., QUEZON CITY  
ILO-ILO CITY, ILOILO  
RESORTS DRIVE, PASAY CITY  
ANDREWS AVE., PASAY CITY  
BGC, TAGUIG CITY  
BGC, TAGUIG CITY  
ASEANA RD., PARAÑAQUE CITY  
CLARK, PAMPANGA

## **HOSPITALS**

ACE MEDICAL CENTER  
ACE MEDICAL CENTER  
ACE MEDICAL CENTER  
ACE MEDICAL CENTER  
ACE MEDICAL CENTER  
FATIMA ANTIPOLLO HOSPITAL  
GARCIA GENERAL HOSPITAL  
METRO HOSPITAL  
NOLI HEALTH CARE  
OUR LADY OF GRACE  
STA. ROSA OPD HOSPITAL (ACE)  
THE MEDICAL CITY ILO-ILO  
THE MEDICAL CITY PASIG  
UNIHEALTH PARAÑAQUE HOSP. & MED. CTR.  
  
UNIHEALTH SOUTHWOODS HOSP. & MED. CTR.  
UST HOSPITAL

PATEROS, RIZAL  
BAHAY TORO, QUEZON CITY  
MALANDAY, VALENZUELA CITY  
TACLOBAN CITY, LEYTE  
TAGBILARAN CITY, BOHOL  
STA. CRUZ, ANTIPOLLO CITY  
MARIKINA HEIGHTS, MARIKINA CITY  
BACOLOD, NEGROS OCCIDENTAL  
CONGRESSIONAL, QUEZON CITY  
GRACE PARK WEST, CALOOCAN CITY  
STA. ROSA, LAGUNA  
MOLO, ILO-ILO CITY  
ORTIGAS AVE., PASIG CITY  
DR. ARCADIO SANTOS AVE., PARAÑAQUE CITY  
BIÑAN, LAGUNA  
ESPAÑA, MANILA

## **HOUSING**

BELLA VITA  
BELLA VITA  
BELLA VITA  
NEOPOLITAN  
URBAN DECA HOMES MAHOGANY  
URBAN DECA HOMES MARILAO

CAGAYAN DE ORO, MISAMIS ORIENTAL  
TAYABAS, QUEZON  
PILA, LAGUNA  
FAIRVIEW, QUEZON CITY  
IMUS, CAVITE  
MARILAO, BULACAN

## **MALLS**

ARVO MALL  
CENTRIS WALK  
CITYMALL  
CITYMALL COMMERCIAL CTR  
FISHER MALL  
LCC MALL  
ROBINSONS CEBU  
ROBINSONS MAGNOLIA MALL

ALABANG, MUNTINLUPA CITY  
QUEZON AVE., QUEZON CITY  
TUGUEGARAO CITY, TUGUEGARAO  
MAYOMBO, DAGUPAN CITY  
QUEZON AVE., QUEZON CITY  
NAGA, CAMARINES SUR  
B. RODRIGUEZ ST. CEBU CITY  
AURORA BLVD., QUEZON CITY





## **MALLS (Continuation..)**

ROBINSONS MALL  
ROBINSONS TACLOBAN EXPANSION  
SILVER CITY  
SM CYBERZONE  
STARMALL BATAAN  
STARMALL LAS PINAS  
STARMALL STA. ROSA  
STARMALL-DAANGHARI  
THE DISTRICT MALL  
THE HIVE  
TIENDESITAS  
TRINOMA TERMINAL  
UP TOWN MALL PHASE 2  
VENICE GRAND CANAL MALL

NORTH, TACLOBAN CITY  
NORTH, TACLOBAN CITY  
UGONG, PASIG CITY  
EDSA MACAPAGAL, PASAY CITY  
BALANGA, BATAAN  
ALABANG ZAPOTE, LAS PIÑAS CITY  
STA. ROSA, LAGUNA  
BACOR, CAVITE  
IMUS, CAVITE  
TAYTAY, RIZAL  
TIENDESITAS, PASIG CITY  
NORTH EDSA, QUEZON CITY  
KATIPUNAN AVE., QUEZON CITY  
BGC, TAGUIG CITY

## **NHA PROJECTS**

NHA – LRB  
NHA CAMARIN  
NHA PANDI  
NHA PLEASANT  
NHA SAN JUAN  
NHA TALA  
NHA VALENZUELA  
NHA VITAS

HOLY SPIRIT, QUEZON CITY  
CAMARIN, CALOOCAN CITY  
PANDI, BULACAN  
SAN JOSE DEL MONTE, BULACAN  
SAN JUAN CITY  
TALA, CALOOCAN CITY  
VALENZUELA CITY  
TONDO, MANILA

## **OFFICE BUILDINGS**

BONIFACIO STOP OVER  
ECOPRIME TOWER  
HEXAGON TOWER  
MDI CORPORATE CENTER  
WORLD PLAZA

BGC, TAGUIG CITY  
BGC, TAGUIG CITY  
WEST AVENUE., QUEZON CITY  
BGC, TAGUIG CITY  
BGC, TAGUIG CITY

## **POWER PLANTS**

MERALCO SUB STATION RENOVATION  
MDI BUILDING  
SAN BUENAVENTURA POWER PLANT  
SOLAR PHILIPPINES  
SOLAR POWER PRODUCERS

SIKATUNA VILLAGE., QUEZON CITY  
BGC, TAGUIG CITY  
MAUBAN, QUEZON  
CALATAGAN, BATANGAS  
DIGOS, DAVAO CITY

## **RESORTS**

ANYA RESORTS & RESIDENCES  
FILIPINAS DE ACUZAR  
SISIMAN BAY

TAGAYTAY CITY, CAVITE  
BAGAC, BATAAN  
MARIVELES, BATAAN





## **SCHOOLS**

BATANGAS STATE UNIVERSITY  
DELA SALLE HIGHSCHOOL BUILDING  
FEBIAS COLLEGE OF BIBLE  
FEU BUILDING  
FEU NRMF  
NEW ERA UNIVERSITY  
WEST FAIRVIEW HIGH SCHOOL

LEMERY, BATANGAS  
DASMARIÑAS, CAVITE  
KARUHATAN, VALENZUELA CITY  
ALABANG, MUNTINLUPA CITY  
WEST FAIRVIEW, QUEZON CITY  
CENTRAL AVE., QUEZON CITY  
FAIRVIEW, QUEZON CITY

## **SHOWROOM**

TOYOTA SHOWROOM

ANGELES CITY, PAMPANGA

## **SUBDIVISIONS**

CAMELLA PLAZA ANDALUSIA  
DECA HOMES BELLA VISTA  
DECA HOMES TANZA  
DECA HOMES MARSEILLES  
SUNTRUST CYBERG

SAN FERNANDO, PAMPANGA  
GENERAL TRIAS, CAVITE  
TANZA, CAVITE  
IMUS, CAVITE  
DASMARIÑAS, CAVITE

## **SUPERMARKETS**

PUREGOLD MAYPAJO  
UNIMART

SANGANDAAN, CALOOCAN CITY  
GREENHILLS, SAN JUAN CITY

## **TOLLWAY FACILITY**

PHILIPPINE ARENA

STA. MARIA, BULACAN



## **PPR/HDPE DIVISION**

### **\*PROJECTS SUPPLIED\***

#### **CONDOMINIUMS**

ARCOVIA  
GOLF HILL GARDENS  
GREENBELT HAMILTON  
LA ROSSA  
SAN LORENZO PLACE TOWER 3  
TOYOKO INN  
UPTOWN RITZ RESIDENCES  
URBAN DECA HOMES CAMPVILLE  
VICEROY EAST TOWER

UGONG, PASIG CITY  
CAPITOL HILLS, QUEZON CITY  
LEGASPI VILLAGE, MAKATI CITY  
MATANDANG BALARA, QUEZON CITY  
MAKATI CITY  
MALABON CITY  
BGC, TAGUIG CITY  
MUNTINLUPA CITY  
TAGUIG CITY

#### **HOTEL**

SAVOY HOTEL

PASAY CITY

#### **HOUSING**

BELLA VITA  
BELLA VITA  
BELLA VITA  
KAZARI RESIDENCES  
URBAN DECA HOMES MAHOGANY  
URBAN DECA HOMES MARILAO  
ZURI RESIDENCES

CAGAYAN DE ORO  
TAYABAS, QUEZON  
PILA, LAGUNA  
DASMARIÑAS, CAVITE  
IMUS, CAVITE  
MARILAO, BULACAN  
TAYTAY, RIZAL

#### **MALLS**

CITYMALL  
CITYMALL COMMERCIAL CTR  
LUCKY CHINATOWN MALL

TUGUEGARAO  
MAYOMBO, DAGUPAN CITY  
BINONDO, MANILA

#### **NHA PROJECT**

NHA PANDI

PANDI, BULACAN

#### **RESORT**

ANYA RESORTS & RESIDENCES

TAGAYTAY CITY

#### **SOLAR POWER PLANT**

SOLAR POWER SYSTEM  
SOLAR POWER SYSTEM

SILAY, BACOLOD  
BATAAN



## **LATEST PROJECTS SUPPLIED**

**\* 2018 - 2019 \***

### **2018 Projects**

CAPITOL TOWN CENTER  
CAVITE LAGUNA EXPRESSWAY (CALAX)  
CLARK INTERNATIONAL AIRPORT (NEW TERMINAL BUILDING)  
ESTANCIA EXTENSION  
GALLERIA CORP CENTER & HOLIDAY INN  
MAGNOLIA RESIDENCE  
MARCO POLO  
MRT 7  
NLEX SEGMENT 10  
SAN MIGUEL YAMAMURA PACKAGING CORP.  
SKYWAY STAGE 3  
SKY VILLAS TOWER AT ANDREA NORTH  
SM BAGUIO  
SM ORMOC  
TAFT EAST GATE  
VIRIDIAN

BALANGA BATAAN  
LAGUNA CITY  
CLARK CITY, PAMPANGA  
SHAW BLVD. PASIG  
MAKATI CITY  
NEW MANILA Q.C  
CEBU CITY  
GREATER METRO MANILA  
Q.C/CALOOCAN/VALENZUELA  
IMUS CAVITE  
PACO MANILA  
NEW MANILA Q.C  
BAGUIO CITY  
ORMOC  
CEBU CITY  
SAN JUAN

### **2019 Projects**

CAVITEX C5 LINK (CALAX)  
CONNOR TOWER  
ISABELA BIOMASS PLANT  
MAVEN TOWER  
MAPLE TOWER  
MMDA CCTV / FIBER NETWORK  
URBAN DECA ORTIGAS

CAVITE  
GREENHILLS SAN JUAN  
ISABELA, NORTH LUZON  
CAPITOL COMMON  
ORTIGAS  
GREATER METRO MANILA  
ORTIGAS AVE. EXT., PASIG CITY



# INFRASTRUCTURE PROJECTS

## CAVITEX C5 LINK



## CAVITE-LAGUNA X





# NAIA EXPRESSWAY



# SKYWAY STAGE 3





# MRT 7





# URBAN DECA ORTIGAS



# ISABELA BIOMASS PLANT





# MMDA CCTV / FIBER NETWORK







## **ROOFING DIVISION**

### **\*PROJECTS SUPPLIED\***

ASEAN TIMBER CORPORATION  
CRAYONS PROCESSING INC.  
4-STORIES BUILDING WITH FUTSAL GYM  
PHASES ELECTRICAL WAREHOUSE  
DORMITORY BUILDING  
OFFICE & WAREHOUSE BUILDING  
CROWN ASIA CHEMICALS CORPORATION

VALENZUELA CITY  
CALOOCAN CITY  
STA. CRUZ MANILA  
PASAY CITY  
MANDALUYONG CITY  
STA. MARIA BULACAN  
GUGUINTO BULACAN



**Asean Timber Corporation  
Re-roofing of ATC Shed 2 & 3  
Valenzuela City**



**Crayons Processing Inc.  
Warehouse, Caloocan City**





**4-Storey Building with Futsal Gym,  
Sta. Cruz, Manila**



**Phases Electrical Warehouse  
Pasay City**





**Crown Asia Chemicals Corporation  
Guiguinto Bulacan**





Republic of the Philippines  
Province of Bulacan

**MUNICIPALITY OF GUIGUINTO**

**OFFICE OF THE MAYOR**



☐ New ☒ Renewal

12/31/2020  
Expiration

## BUSINESS PERMIT 2020

### TO WHOM IT MAY CONCERN:

This permit is granted to CROWN ASIA CHEMICALS CORPORATION  
Name of Owner  
residing at 33 MC ARTHUR HIWAY, TUKTUKAN, GUIGUINTO, BULACAN  
Owner's Address  
to operate the CROWN ASIA CHEMICALS CORPORATION  
Business Name  
engaged in MANUFACTURING/EXPORTER/TRADING  
Nature of Business  
geographically located in 33 MC ARTHUR HIWAY, TUKTUKAN, GUIGUINTO, BULACAN  
Business Address

Provided however, that all the requirements pertinent hereto are duly complied with.

This permit is subject to revocation or cancellation in case of violation of any of the rules, regulations and ordinances governing the operation of the above activity/activities.

Issued on January 16, 2020 at the Municipality of Guiguinto, Bulacan, Philippines.

OR Number : 0003971573  
OR Date : 01/16/2020  
Quarter : 1

#### NOTE:

This permit must be displayed conspicuously in the place of business for inspection and considered upon closure of the business.



**AMBROSIO G. CRUZ JR.**  
Municipal Mayor





# CROWN ASIA CHEMICALS CORPORATION

## Company Profile

REPUBLIKA NG PILIPINAS  
KAGAWARAN NG BAYAN NG LAPU-LAPU  
KAWANIHAN NG BUREAU OF INTERNAL REVENUE  
REVENUE REGION 100  
REVENUE DISTRICT NO. 005  
25A

BIR Form No. **2303**  
Revised July 1997

OCN **4RC0001293770**

### CERTIFICATE OF REGISTRATION

TIN	NAME	REGISTRATION DATE
000-240-902-000	CROWN ASIA CHEMICALS CORPORATION	04/14/1997

**REGISTERED ADDRESS**  
33 MC ARTHUR HIGHWAY  
TURTUKAN GUIGUINTO  
BULACAN 3015

**REGISTERED ACTIVITY(IES)**  
**TAX TYPE**  
EXCISE - PETROLEUM PRODUCTS  
REGISTRATION FEE  
WITHHOLDING TAX - COMPENSATION  
WITHHOLDING TAX - FINAL

**INCOME TAX**  
VALUE - ADDED TAX  
WITHHOLDING TAX - EXPANDED/OTH

**TRADE NAME**  
CROWN ASIA CHEMICALS CORPORATION

**LINE OF BUSINESS / INDUSTRY**  
2520 MANUFACTURE OF PLASTIC PRODUCTS

**REMINDEES:**  
1. PAYMENT OF ANNUAL REGISTRATION FEE ON OR BEFORE JANUARY 31, USING BIR FORM NO. 0605  
2. FILING OF REQUIRED RETURN/S TO CONFORM WITH THE ABOVE TAX TYPE/S, WHETHER WITH OR WITHOUT BUSINESS OPERATION, TO AVOID PENALTIES  
3. THE FOLLOWING SHALL LIKEWISE BE ACCOMPLISHED:  
a. APPLICATION FOR REGISTRATION OF MANUAL BOOKS OF ACCOUNTS AND/OR COMPUTERIZED ACCOUNTING SYSTEM OR COMPONENTS THEREOF (BIR FORM NO. 1900)  
b. APPLICATION FOR AUTHORITY TO PRINT MANUAL RECEIPTS AND INVOICES (BIR FORM NO. 1906)  
4. IMMEDIATELY INFORM THIS DISTRICT OFFICE IN CASE OF TRANSFER/CESSATION OF BUSINESS AND OTHER CONCERNS BY FILING BIR FORM NO. 1905 TO STOP GENERATION OF OPEN CASSES

I HEREBY CERTIFY THAT THE ABOVE NAMED PERSON IS REGISTERED AS INDICATED ABOVE, UNDER THE PROVISIONS OF THE NATIONAL INTERNAL REVENUE CODE, AS AMENDED.

ALFREDO P. SANTOS  
REVENUE DISTRICT OFFICER (signature over printed name)

AMALIA E. DE LEON  
Asst. Revenue District Officer

Additional tax type Excise tax  
February 06, 2019

THIS CERTIFICATE MUST BE EXHIBITED CONSPICUOUSLY IN THE PLACE OF BUSINESS



**Certificate of Registration**  
**From**  
**International Organization for Standardization**  
**(ISO)**  
**And**  
**Certifications from Philippine Standard**





CERTIFICATION  
INTERNATIONAL

## Certificate of Registration

This is to certify that

### **Crown Asia Chemicals Corporation – Pipes Division**

Km. 33 McArthur Highway, Tuktukan, Guiguinto, Bulacan, Philippines

operates a management system which has been assessed as conforming to

### **ISO 9001:2015**

for the scope of activities

**Manufacture and distribution of thermoplastic pipes, namely unplasticized Polyvinyl Chloride Pipes (uPVC), High Density Polyethylene Pipes (HDPE), and Polypropylene Random Pipes (PPR). Distribution of pipe fittings.**

Certificate No: **CIP/4250/09/06/648**

Issue Date: **09 July 2018**

Valid Until: **25 June 2021**

subject to adherence to the agreed ongoing audit programme, successful endorsement of certification following each audit and compliance with CI Regulations.

Date of Original Issue : **26 June 2009**

**Renato V. Navarrete**  
Chairman and President



Certification International Philippines, Inc.  
8<sup>th</sup> Floor, OMM-Citra Building, San Miguel Avenue, Ortigas Center, Pasig City, Metro Manila, Philippines 1605  
[www.certificationinternational.ph](http://www.certificationinternational.ph)





CERTIFICATION  
INTERNATIONAL

## Appendix to Certificate

### Crown Asia Chemicals Corporation – Pipes Division

Certificate No : **CIP/4250/09/06/648**

#### Head Office

Room 508, President Tower, 81 Timog Avenue, Diliman, Quezon City,  
Metro Manila, Philippines

**Renato V. Navarrete**  
Chairman and President



CERTIFICATION  
INTERNATIONAL

## Certificate of Registration

CROWN ASIA CHEMICALS CORPORATION  
**UNCONTROLLED COPY**

SIGN/DATE: *[Signature]* *and* *and*  
DCC - COMPOUNDS DIVISION

This is to certify that

### **Crown Asia Chemicals Corporation – Compounds Division**

Km. 33 McArthur Highway, Bo. Tuktukan, Guiguinto, Bulacan, Philippines

operates a management system which has been assessed as conforming to

### **ISO 9001:2015**

for the scope of activities

**Design, development, manufacture, and distribution of thermoplastic compounds for various applications.**

Certificate No: **CIP/4353/10/02/691**

Issue Date: **07 April 2019**

Valid Until: **06 April 2022**

subject to adherence to the agreed ongoing audit programme,  
successful endorsement of certification following each audit and  
compliance with CI Regulations.

Date of Original Issue : **07 April 2010**

**Renato V. Navarrete**  
Chairman and President



ACCREDITED  
QMS Certification Body  
Accreditation No:  
MSA-001





CERTIFICATION  
INTERNATIONAL

## Appendix to Certificate

### Crown Asia Chemicals Corporation – Compounds Division

Certificate No : CIP/4353/10/02/691

#### Head Office

Room 506, President Tower, 81 Timog Avenue, Diliman, Quezon City,  
Metro Manila, Philippines

CROWN ASIA CHEMICALS CORPORATION

**UNCONTROLLED COPY**

SIGN/DATE *[Signature]* 04.0.0

DCC - COMPOUNDS DIVISION

**Renato V. Navarrete**  
Chairman and President



Pursuant to the provisions of Executive Order No. 101, Series of 1967,  
and in conjunction with the provisions of  
Republic Act No. 4109, Executive Order No. 913, Series of 1983 and  
Executive Order No. 133, Series of 1987  
and their implementing rules and regulations,  
The Bureau of Philippine Standards hereby grants the license to use the

**Philippine Standard  
Quality Certification Mark**



**CERTIFIED  
Product Quality**  
(SYSTEM No. 5 as per ISO/IEC 17067:2013)

In favor of

**CROWN ASIA CHEMICALS CORPORATION**  
Km. 33 McArthur Highway, Bo. Tuktukan, Guiguinto, Bulacan

Having been assessed and found conforming to the requirements of Department  
Administrative Order No. 4 series of 2008 and its future amendments and revisions,  
PNS 65:1993, Amd. 01:1987 and their implementing guidelines, for its **UPVC PIPES  
FOR POTABLE WATER SUPPLY** covered in the scope of certification as  
described in the attached Certificate No. 1743.

Issued on 13 June 2017 at Makati City, Philippines

License No. Q-1743

This license is valid until 12 June 2020 subject to the continuing conformity with the PS  
certification criteria and the Terms and Conditions of this PS License.

  
**ENGR. MARIO U. GAUDIANO**  
Officer-in-Charge

 **BUREAU OF PHILIPPINE STANDARDS**  
301 Trade and Industry Building  
301 Sen. Gil Puyat Avenue, Makati City  
Tel. No. 632 7511 4724 Fax No. 632 7511 4720  
Email Address: [bps@dti.gov.ph](mailto:bps@dti.gov.ph)  
Website: [www.bps.dti.gov.ph](http://www.bps.dti.gov.ph)

This license is not valid unless signed by the BPS Bureau Director  
or his authorized representative and appended to a valid PS certificate.







**PHILIPPINE STANDARD CERTIFICATE**

643975

CONTROL NO.  
9-036456

**Company :** CROWN ASIA CHEMICALS CORPORATION

**Plant Address :** Km. 33 McArthur Highway, Bo. Tuktukan, Guiguinto, Bulacan

**License No. :** Q-1743

**Certificate No. :** 1743 **Revision No. 01**

**SCOPE OF CERTIFICATION**

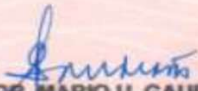
**Product :** UPVC PIPES FOR POTABLE WATER SUPPLY


**Brandname :** CROWN BLUE/CROWN UNIVERSAL BLUE/CROWN PRESSURE

**Types/Model :** CROWN BLUE/CROWN UNIVERSAL BLUE - Series 8 - 20, 25, 32, 40, 50, 63, 75, 90, 110, 160, & 225  
CROWN PRESSURE - Series 10 - 63, 75, 90, 110, 160, & 225


**Date Approved :** 13 June 2017

Nothing follows

  
**ENGR. MARIO U. GAUDIANO**  
Officer-in-Charge

  
**dti**  
DEPARTMENT OF  
TRADE AND INDUSTRY  
PHILIPPINES

BUREAU OF PHILIPPINE STANDARDS  
3rd Trade and Industry Building  
381 Sen. Gil Puyat Avenue, Makati City  
Tel. No. 832 751 4724 Fax No. 832 751 4720  
Email Address: [bps@dti.gov.ph](mailto:bps@dti.gov.ph)  
Website: [www.bps.dti.gov.ph](http://www.bps.dti.gov.ph)



This certificate is not valid unless signed by the BPS Bureau Director or his authorized representative and appended to a valid PS Quality and/or Safety Certification Mark License.





Pursuant to the provisions of Executive Order No. 101, Series of 1967,  
and in conjunction with the provisions of  
Republic Act No. 4109, Executive Order No. 913, Series of 1983 and  
Executive Order No. 133, Series of 1987  
and their implementing rules and regulations,  
The Bureau of Philippine Standards hereby grants the license to use the

**Philippine Standard  
Quality Certification Mark**



**CERTIFIED  
Product Quality**  
(SYSTEM No. 5 as per ISO/IEC 17067:2013)

In favor of

**CROWN ASIA CHEMICALS CORPORATION**  
Km. 33 McArthur Highway, Bo. Tuktukan, Guiguinto, Bulacan

Having been assessed and found conforming to the requirements of Department  
Administrative Order No. 4 series of 2008 and its future amendments and revisions,  
PNS 14:1983 Amd. 01:1987 and their implementing guidelines, for its **UPVC RIGID  
ELECTRICAL CONDUIT** covered in the scope of certification as described in the  
attached Certificate No. 1780.

Issued on 05 June 2017 at Makati City, Philippines

License No. **Q-1780**

This license is valid until 04 June 2020 subject to the continuing conformity with the PS  
certification criteria and the Terms and Conditions of this PS License.

  
**ASSISTANT SECRETARY ERNESTO V. PEREZ**  
Officer-in-Charge

 **BUREAU OF PHILIPPINE STANDARDS**  
3F Trade and Industry Building  
301 Sen. Gil Puyat Avenue, Makati City  
Tel. No. 832 751 4724 Fax No. 832 751 4720  
Email Address: [bps@dti.gov.ph](mailto:bps@dti.gov.ph)  
Website: [www.bps.dti.gov.ph](http://www.bps.dti.gov.ph)

 643916



This license is not valid unless signed by the BPS Bureau Director  
or his authorized representative and appended to a valid PS certificate.





**PHILIPPINE STANDARD CERTIFICATE**

643922

CONTROL NO.  
7-036256

Company : CROWN ASIA CHEMICALS CORPORATION

Plant Address : Km. 33 McArthur Highway, Bo. Tuktukan, Guiguinto, Bulacan

License No. : Q-1780

Certificate No. : 1780

Revision No. 02

**SCOPE OF CERTIFICATION**

Product : uPVC RIGID ELECTRICAL CONDUIT

Brandname : CROWN HI-TECH/CROWN SUPREME/CROWN EXTREME

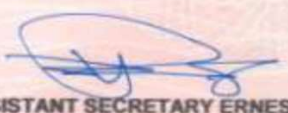
Types/Model :


Brandname	Type/Size
CROWN HI-TECH	Thinwall (mm) - 20, 25, 32, 40, 50, 63, 75, 90, & 110
CROWN SUPREME/ CROWN EXTREME	Thickwall (mm) - 20, 25, 32, 40, 50, 63, 75, 90, & 110


Date Approved : 05 June 2017

Nothing follows


DEPARTMENT OF  
TRADE & INDUSTRY  
BUREAU OF PHILIPPINE STANDARDS

  
ASSISTANT SECRETARY ERNESTO V. PEREZ  
Officer-in-Charge

 BUREAU OF PHILIPPINE STANDARDS  
36F Trade and Industry Building  
301 Sem. 6th Payat Avenue, Makati City  
Tel. No. 632 751 4724 Fax No. 632 751 4720  
Email Address: [standards@dti.gov.ph](mailto:standards@dti.gov.ph)  
Website: [www.bps.dti.gov.ph](http://www.bps.dti.gov.ph)



This certificate is not valid unless signed by the BPS Bureau Director or his authorized representative and appended to a valid PS Quality and/or Safety Certification Mark License.







**CROWN ASIA**  
CHEMICALS CORPORATION

Company Profile

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**Certificate of Registration**  
**From**  
**Intellectual Property Philippines**



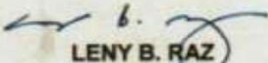
**IP  
PHL**

**Certificate of Registration**

Registration No. : 4/2014/00004482  
Date of Registration : 11 December 2014  
Term : 10 years (until 11 December 2024)



Filing Date	: 11 April 2014
Registrant	: CROWN ASIA COMPOUNDERS CORPORATION [PH]
Address	: Km. 33 McArthur Highway, Tuktukan, Guiguinto, Bulacan, Philippines
Class(es) - Goods/Services	: Class 40: Manufacturing of pipe products and plastic compounds
Claim of Color(s)	: Red, green
Disclaimer	: None
Transliteration / Translation	: None
Three-dimensional	: No
Claim of Priority	: None
Published for Opposition	: IPO e-Gazette, published on 10/11/2014

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks


Document No: 2015/46121



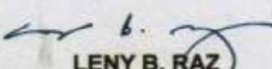
**IPO**  
**PHL**

**Certificate of Registration**

Registration No. : 4/2014/00004480  
Date of Registration : 11 December 2014  
Term : 10 years (until 11 December 2024)



Filing Date	: 11 April 2014
Registrant	: CROWN ASIA COMPOUNDERS CORPORATION [PH]
Address	: Km. 33 McArthur Highway, Tuktukan, Gulguinto, Bulacan, Philippines
Class(es) - Goods/Services	: Class 40: Manufacturing of pipe products and plastic compounds
Claim of Color(s)	: Gold, green
Disclaimer	: None
Transliteration / Translation	: None
Three-dimensional	: No
Claim of Priority	: None
Published for Opposition	: IPO e-Gazette, published on 10/11/2014

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks

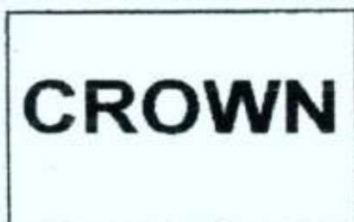
Document No: 2015/46120





## Certificate of Registration

Registration No.: 4-2006-013655  
Date of Registration: August 11, 2008  
Term: Ten (10) years (until August 11, 2018 )



**CROWN**

Application No.	: 4-2006-013655
Filing Date	: December 20, 2006
Registrant	: CROWN ASIA COMPOUNDERS CORP.
Registrant's Address	: ROOM 506 PRESIDENT TOWER, TIMOG AVENUE, QUEZON CITY
Class(es)	: 19
Goods/Services	: PVC PIPE OR CONDUIT & FITTINGS.
Claim of Color	: NONE
Disclaimer	: NONE
Claim of Priority	: NONE
Translation or Transliteration	: NONE
Name of Examiner	: NELY C. EDER
Published for Opposition	: IPO e-gazette, released on July 11, 2008

Signed in Makati City, Philippines on NOV 18 2008

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks



## Certificate of Registration

Registration No.: 4-2006-013659  
Date of Registration: October 13, 2008  
Term : Ten (10) years (until October 13, 2018 )

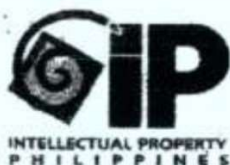
**CROWN SUPREME**

**CROWN SUPREME**

Application No.	: 4-2006-013659
Filing Date	: December 20, 2006
Registrant	: CROWN ASIA COMPOUNDERS CORPORATION
Registrant's Address	: ROOM 508 PRESIDENT TOWER, TIMOG AVENUE, QUEZON CITY
Class(es)	: 19
Goods/Services	: PVC PIPE OR CONDUIT & FITTINGS.
Claim of Color	: NONE
Disclaimer	: APPLICANT DISCLAIMS "SUPREME".
Claim of Priority	: NONE
Translation or Transliteration	: NONE
Name of Examiner	: NELY C. EDER
Published for Opposition	: IPO e-gazette, released on September 12, 2008

Signed in Makati City, Philippines on NOV 25 2008

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks



## Certificate of Registration

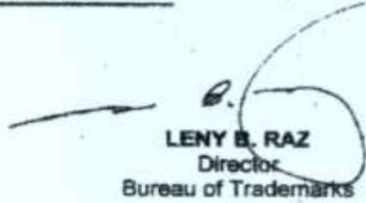
Registration No.: 4-2006-013656  
Date of Registration: August 11, 2006  
Term : Ten (10) years (until August 11, 2016 )

**CROWN BLUE**

**CROWN BLUE**


Application No.	: 4-2006-013656
Filing Date	: December 20, 2006
Registrant	: CROWN ASIA COMPOUNDERS CORP.
Registrant's Address	: ROOM 506 PRESIDENT TOWER, TIMOG AVENUE, QUEZON CITY
Class(es)	: 19
Goods/Services	: PVC PIPE OR CONDUIT & FITTINGS.
Claim of Color	: NONE
Disclaimer	: NONE
Claim of Priority	: NONE
Translation or Transliteration	: NONE
Name of Examiner	: NELY C. EDER
Published for Opposition	: IPO e-gazette, released on July 11, 2008

Signed in Makati City, Philippines on NOV 18 2006

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks





  
**INTELLECTUAL PROPERTY  
PHILIPPINES**

**Certificate of Registration**

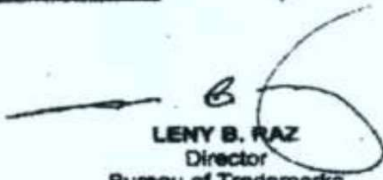
Registration No.: 4-2006-013657  
Date of Registration: August 11, 2008  
Term : Ten (10) years (until August 11, 2018 )

**CROWN FLEX**

**CROWN FLEX**

Application No.	: 4-2006-013657
Filing Date	: December 20, 2006
Registrant	: CROWN ASIA COMPOUNDERS CORP.
Registrant's Address	: ROOM 508 PRESIDENT TOWER, TIMOG AVENUE, QUEZON CITY
Class(es)	: 19
Goods/Services	: PVC PIPE OR CONDUIT & FITTINGS.
Claim of Color	: NONE
Disclaimer	: NONE
Claim of Priority	: NONE
Translation or Transliteration	: NONE
Name of Examiner	: NELY C. EDER
Published for Opposition	: IPO e-gazette, released on July 11, 2008

Signed in Makati City, Philippines on NOV 18 2008

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks



## Certificate of Registration

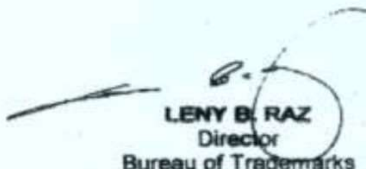
Registration No.: **4-2006-013658**  
Date of Registration: **August 13, 2007**  
Term : Ten (10) years (until August 13, 2017 )

**CROWN UNIVERSAL**

**CROWN UNIVERSAL**

Application No. : **4-2006-013658**  
Filing Date : **December 20, 2006**  
Registrant : **CROWN ASIA COMPOUNDERS CORP.**  
Registrant's Address : **ROOM 508 PRESIDENT TOWER, TIMOG AVENUE, QUEZON CITY**  
Class(es) : **17**  
Goods/Services : **PVC PIPE OR CONDUIT & FITTINGS**  
Claim of Color : **NONE**  
Disclaimer : **NONE**  
Claim of Priority : **NONE**  
Translation or Transliteration : **NONE**  
Name of Examiner : **NELY C. EDER**  
Published for Opposition : **IPO e-gazette, released on July 13, 2007**

Signed in Makati City, Philippines on OCT 26 2007

  
**LENY B. RAZ**  
Director  
Bureau of Trademarks



**CROWN ASIA**  
CHEMICALS CORPORATION

Company Profile

---

**Certificate of Assessment**  
**By**  
**Quality Management Systems Limited**





QMS Quality Management Systems Limited

## *Registration Certificate*

This document certifies that the quality administration systems of  
**Crown Asia Compounders Corp.**

have been assessed and approved by  
QMS Quality Management Systems Limited to the following  
quality administration systems, standards and guidelines:-

ISO 9002 : 1994

The approved quality administration systems apply to the following:-

Manufacturers and Distributors of Chemical Compounds.

Original Approval: 1st March 1998

Current Certificate: 1st March 1998

Certificate Expiry: 28th February 2008

Certificate Number: HK 2953

On behalf of  
QMS Quality Management Systems Limited



*This Certificate remains valid while the holder maintains their quality administration systems in accordance with the standards and guidelines above, which will be audited by QMS Quality Management Systems Limited. This Certificate is the property of QMS Quality Management Systems Limited and must be returned in the event of cancellation.*



# CROWN ASIA CHEMICALS CORPORATION

Km 33. McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## TECHNICAL DATA SHEET

### Product Description

#### CROWN SUPREME ELECTRICAL PIPES

Unplasticized Polyvinyl Chloride suitable for high quality conduit pipes, produced through conventional pipe extrusion process.

**Typical Application:** Electrical/conduit pipes; For insulation and fire resistance

### Properties:

Properties	Typical Value	Unit	Test Method
<b><u>Physical Properties</u></b>			
Vicat Softening Point °C, min	76	°C	PNS ISO 2507-1
Heat Reversion, %, max	5	%	PNS ISO 2505-1
<b><u>Mechanical Properties</u></b>			
Tensile Strength @ 28C	27.5	MPa	PNS ISO 6259-1
Elongation @ Break, min	15	%	PNS ISO 6259-1
Impact Strength, TIR max	10	%	PNS ISO 3127
Flattening, % OD	40	%	PNS ASTM D2241
Resistance to Burning	Self-extinguishing	-	
Insulation Resistance, min	100	Ohms	
Durometer Hardness, min	70	Shore D	ASTM D2240

Crown Supreme uPVC Pipe complies with PNS 14:2005



# CROWN ASIA CHEMICALS CORPORATION

Km 33. McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## TECHNICAL DATA SHEET

### Product Description

CROWN SANITARY SUPREME PIPES

Unplasticized Polyvinyl Chloride suitable for drain, waste and vent (DWV).

**Typical Application:** Drain, waste and vent pipes; For sewage.

### Properties:

Properties	Typical Value	Unit	Test Method
<b><u>Physical Properties</u></b>			
Vicat Softening Point °C, min	> 79	°C	PNS ISO 2507-1
Heat Reversion, %, max	5	%	PNS ISO 2505-1
Resistance to Acetone	No delamination/ disintegration	-	PNS ISO 3472
<b><u>Mechanical Properties</u></b>			
Tensile Strength @ 28C	45	MPa	PNS ISO 6259-1
Elongation @ Break	15	%	PNS ISO 6259-1
Impact Strength, TIR max	10	%	PNS ISO 3127
Flattening, % OD	40	%	PNS ASTM D2241
Resistance to Burning	Self-extinguishing	-	
Durometer Hardness, min	70	Shore D	ASTM D2240
Watertightness @0.5 bar	No leakage	-	Annex A PNS 1950
Airtightness @0.1 bar	No leakage	-	Annex B PNS 1950
ESCR, F50 (condition B, 25% Igepal)	> 1000	hrs	ASTM D1693

Crown Sanitary Supreme uPVC Pipe complies with PNS 1950:2003





# CROWN ASIA CHEMICALS CORPORATION

Km 33, McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## TECHNICAL DATA SHEET

### Product Description

CROWN HYDROPLUS/HYDROFLEX/HYDROTECH

Polypropylene Random Pipes suitable for Hot and Cold Water Installations.

**Typical Application:** High pressure, Hot and Cold fluid pipes; Drinking water pipes.

### Typical Properties:

PROPERTIES	TYPICAL VALUE	UNIT	TEST METHOD
<b><u>Physical Properties</u></b>			
Melt Flow Rate (190°C, 5 kg)	0.43	g/10 min	ISO 1133
Density	0.957	g/cm <sup>3</sup>	ISO 1183
Vicat Softening Point @ 10 N, 50°C/hr	118	°C	ASTM D1525
Melting Point	135	°C	ASTM D3418
<b><u>Mechanical Properties</u></b>			
Tensile Strength @ Yield	22	MPa	ISO 527
Tensile Strength @ Break	30	MPa	ISO 527
Elongation @ Break	350	%	ISO 527
Stiffness	7500	kg/cm <sup>2</sup>	ASTM D747
Flexural Modulus	11000	kg/cm <sup>2</sup>	ASTM D790
Notched Izod Impact Strength	24 (No Break)	kg.cm/cm	ASTM D256
Durometer Hardness	59	Shore D	ASTM D2240
ESCR, F50 (condition B, 25% Igepal)	> 500	hrs	ASTM D1693
<b><u>Other Properties</u></b>			
Carbon Black Content	2.25	%	ISO 6964
Oxidative Induction Time (OIT, 200°C)	20	Minutes	ISO 11357-6
Classification	PE 80	-	ISO 12162



# CROWN ASIA CHEMICALS CORPORATION

Km 33, McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

**Product Size:**

PRODUCT SIZE	O D , m in ( m m )	THICKNESS, m in ( m m )				
		SDR 9	SDR 11	SDR 13.5	SDR 17	SDR 26
20	20.00	2.30	1.90	1.50	-	-
25	25.00	3.00	2.30	2.00	-	-
32	32.00	3.60	3.00	2.40	2.00	-
40	40.00	4.50	3.70	3.00	2.40	-
50	50.00	5.60	4.60	3.70	3.00	2.00
63	63.00	7.10	5.80	4.70	3.80	2.50
75	75.00	8.40	6.80	5.60	4.50	2.90
90	90.00	10.10	8.20	6.70	5.40	3.50
110	110.00	12.30	10.00	8.10	6.60	4.20
160	160.00	17.90	14.60	11.80	9.50	6.20
225	225.00	25.20	20.50	16.60	13.40	8.60
280	280.00	31.30	25.40	20.60	16.60	10.70

**Pressure Rating:**

Pipe Series	Nominal Pressure, bar	Operating Pressure, psi
SDR 9	PN 16	232.06
SDR 11	PN 12.5	181.30
SDR 13.5	PN 10	145.04
SDR 17	PN 8	116.03
SDR 26	PN 6	87.02

Crown Sigma HDPE Pipe complies with PNS ISO 4427:2002



# CROWN ASIA CHEMICALS CORPORATION

Km 33. McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## TECHNICAL DATA SHEET

### Product Description

CROWN SIGMA HDPE PIPE PE80

High-Density Polyethylene Pipe suitable for high quality pressure pipes, produced through conventional pipe extrusion process.

**Typical Application:** High pressure and temperature pipes; Drinking water pipes, Industrial pipes and Sewer pipes.

### Typical Properties:

PROPERTIES	TYPICAL VALUE	UNIT	TEST METHOD
<b><u>Physical Properties</u></b>			
Melt Flow Rate (190°C, 5 kg)	0.43	g/10 min	ISO 1133
Density	0.957	g/cm <sup>3</sup>	ISO 1183
Vicat Softening Point @ 10 N, 50°C/hr	118	°C	ASTM D1525
Melting Point	135	°C	ASTM D3418
<b><u>Mechanical Properties</u></b>			
Tensile Strength @ Yield	22	MPa	ISO 527
Tensile Strength @ Break	30	MPa	ISO 527
Elongation @ Break	350	%	ISO 527
Stiffness	7500	kg/cm <sup>2</sup>	ASTM D747
Flexural Modulus	11000	kg/cm <sup>2</sup>	ASTM D790
Notched Izod Impact Strength	24 (No Break)	kg.cm/cm	ASTM D256
Durometer Hardness	59	Shore D	ASTM D2240
ESCR, F50 (condition B, 25% Igepal)	> 500	hrs	ASTM D1693
<b><u>Other Properties</u></b>			
Carbon Black Content	2.25	%	ISO 6964
Oxidative Induction Time (OIT, 200°C)	20	Minutes	ISO 11357-6
Classification	PE 80	-	ISO 12162





# CROWN ASIA CHEMICALS CORPORATION

Km 33. McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## Product Size:

PRODUCT SIZE	OD, min (mm)	THICKNESS, min (mm)				
		SDR 9	SDR 11	SDR 13.5	SDR 17	SDR 26
20	20.00	2.30	1.90	1.50	-	-
25	25.00	3.00	2.30	2.00	-	-
32	32.00	3.60	3.00	2.40	2.00	-
40	40.00	4.50	3.70	3.00	2.40	-
50	50.00	5.60	4.60	3.70	3.00	2.00
63	63.00	7.10	5.80	4.70	3.80	2.50
75	75.00	8.40	6.80	5.60	4.50	2.90
90	90.00	10.10	8.20	6.70	5.40	3.50
110	110.00	12.30	10.00	8.10	6.60	4.20
160	160.00	17.90	14.60	11.80	9.50	6.20
225	225.00	25.20	20.50	16.60	13.40	8.60
280	280.00	31.30	25.40	20.60	16.60	10.70

## Pressure Rating:

Pipe Series	Nominal Pressure, bar	Operating Pressure, psi
SDR 9	PN 16	232.06
SDR 11	PN 12.5	181.30
SDR 13.5	PN 10	145.04
SDR 17	PN 8	116.03
SDR 26	PN 6	87.02

Crown Sigma HDPE Pipe complies with PNS ISO 4427:2002



# CROWN ASIA CHEMICALS CORPORATION

Km 33. McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## TECHNICAL DATA SHEET

### Product Description

CROWN FUERZA HDPE PIPE PE100

High-Density Polyethylene Pipe suitable for high quality pressure pipes, produced through conventional pipe extrusion process.

**Typical Application:** High pressure and temperature pipes; Drinking water pipes, Industrial pipes and Sewer pipes.

### Typical Properties:

PROPERTIES	TYPICAL VALUE	UNIT	TEST METHOD
<b>Physical Properties</b>			
Melt Flow Rate (190°C, 5 kg)	0.25	g/10 min	ISO 1133
Density	0.952	g/cm <sup>3</sup>	ISO 1183
Vicat Softening Point @ 10 N, 50°C/hr	124	°C	ASTM D1525
Melting Point	128	°C	ASTM D3418
<b>Mechanical Properties</b>			
Tensile Strength @ Yield	25	MPa	ISO 527
Tensile Strength @ Break	33	MPa	ISO 527
Elongation @ Break	750	%	ISO 527
Stiffness	7500	kg/cm <sup>2</sup>	ASTM D747
Flexural Modulus	11000	kg/cm <sup>2</sup>	ASTM D790
Notched Izod Impact Strength	48 (No Break)	kg.cm/cm	ASTM D256
Durometer Hardness	64	Shore D	ASTM D2240
ESCR, F50 (condition B, 25% Igepal)	> 1000	hrs	ASTM D1693
<b>Other Properties</b>			
Carbon Black Content	-	%	ISO 6964
Oxidative Induction Time (OIT, 200°C)	-	Minutes	ISO 11357-6
Classification	-	-	ISO 12162



# CROWN ASIA CHEMICALS CORPORATION

Km 33. McArthur Highway, Brgy. Tuktukan, Guiguinto, Bulacan

## Product Size:

PRODUCT SIZE	OD, min (mm)	THICKNESS, min (mm)				
		SDR 9	SDR 11	SDR 13.5	SDR 17	SDR 26
20	20.00	2.30	1.90	1.50	-	-
25	25.00	3.00	2.30	2.00	-	-
32	32.00	3.60	3.00	2.40	2.00	-
40	40.00	4.50	3.70	3.00	2.40	-
50	50.00	5.60	4.60	3.70	3.00	2.00
63	63.00	7.10	5.80	4.70	3.80	2.50
75	75.00	8.40	6.80	5.60	4.50	2.90
90	90.00	10.10	8.20	6.70	5.40	3.50
110	110.00	12.30	10.00	8.10	6.60	4.20
160	160.00	17.90	14.60	11.80	9.50	6.20
225	225.00	25.20	20.50	16.60	13.40	8.60
280	280.00	31.30	25.40	20.60	16.60	10.70

## Pressure Rating:

Pipe Series	Nominal Pressure, bar	Operating Pressure, psi
SDR 9	PN 20	290.08
SDR 11	PN 16	232.06
SDR 13.5	PN 12.5	181.30
SDR 17	PN 10	145.04
SDR 26	PN 6	116.03

Crown Fuerza HDPE Pipe complies with PNS ISO 4427:2002





## CROWN ASIA CHEMICALS CORPORATION

ITC Road, ITC Compound, Brgy. Canumay East, Valenzuela City

### TECHNICAL DATA SHEET

#### Product Description

CROWN ROOFING CORRWAVE AND CROWN ROOFING STRONGRIB

Unplasticized Polyvinyl Chloride (uPVC) roof features heat resistant, non-corrosive, impact resistant, and UV protected roof, produced through conventional roof extrusion process.

**Typical Application:** Warehouses, Residential, Commercial Buildings, Agri-Buildings such as poultry, piggery, etc.

Temperature comparison of Crown uPVC Roofing and Pre-painted Metal Roofing using Heat Gun (Date: March 22, 2019, Time: 1PM)

CROWN UPVC ROOFING Color	CROWN UPVC ROOFING Temperature	PRE-PAINTED METAL ROOFING Temperature	Temperature Difference
Warm White	42.2°C	63.1°C	20.9°C
Ivory White	45.6°C	63.1°C	17.5°C



CROWN uPVC ROOFING



PRE-PAINTED METAL ROOFING

# CROWN PVC ROOFING

## Ambient Temperature Test

One of the advantages of our crown uPVC roofing that makes it more efficient than those made from metal such as Galvanized Iron (GI) roof, is its low thermal conductivity which means that less amount of heat flows inside the house.

The test was carried out by using a fabricated thermo box with two chambers. The upper and lower chambers were attached with a coil heater to induce the heat set on a thermocontroller. Placed between the upper and lower chambers is the test sample roof. Both chambers were enclosed with glass.

A temperature measuring device was placed inside the upper and lower chambers to measure its actual ambient temperature. A crown uPVC roof and a pre-painted GI roof is attached on their corresponding thermobox with a coil heater in the upper chamber set at 80°C (see Annex A for pictures of the actual set-up).

Date Conducted: May 23, 2019

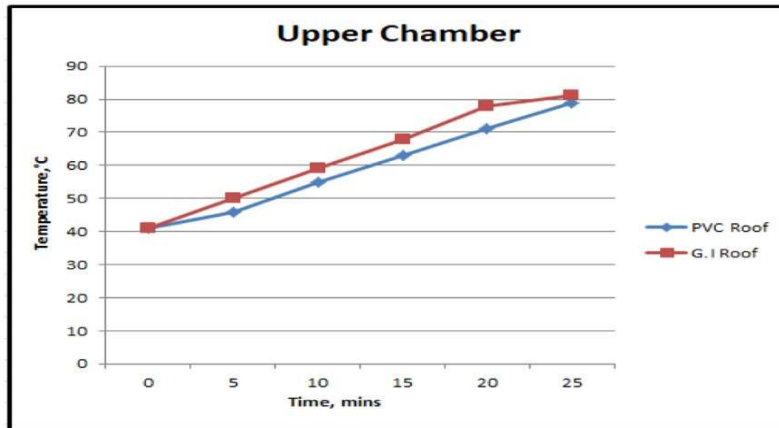
Time Started: 03:05 PM

Crown uPVC roof = 2.5mm Ivory White

Pre-painted GI roof = 0.60mm

**Table 1.** PVC and G.I Roof Thermobox Ambient Temperature Data

Set Temperature of Coil Heater located on the Upper Chamber = 80°C				
Time, minutes	Upper Chamber Ambient Temperature, °C		Lower Chamber Ambient Temperature, °C	
	PVC Roof	GI Roof	PVC Roof	GI Roof
0	41	41	30	30
5	46	50	31	33
10	55	59	33	35
15	63	68	34	36
20	71	78	36	38
25	79	81	37	40

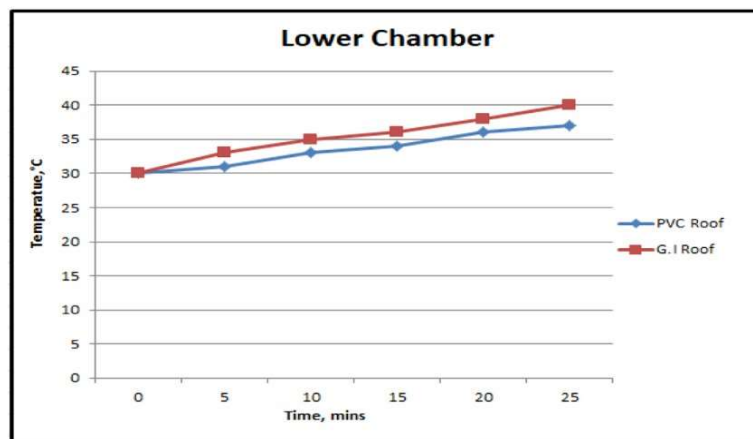


**Figure 1.** Relationship of temperature with time of Upper Chamber - PVC Roof and G.I Roof

Figure 1 shows the behavior of ambient temperature with time of upper chamber for both PVC and GI roofs. Initially at time 0, both chambers have equal ambient temperature of 41°C. As time increases, ambient temperature of upper chamber with GI roof increased rapidly as compared with PVC roof.

For 25 minutes, the upper chamber with GI roof always maintained a higher ambient temperature than the upper chamber with PVC roof, this is because GI roof is a material having high thermal conductivity or very little resistance to the flow of thermal energy. On the 25<sup>th</sup> minute mark, the enclosed glass of the upper chamber with GI roof suddenly cracked as it reaches an ambient temperature of 81°C (see Annex A for picture).

The curve of the upper chamber with PVC roof produced a straight line depicting constant change in temperature. Meanwhile, the curve of the upper chamber with GI roof depicts a constant change in temperature until the 20<sup>th</sup> minute mark.



**Figure 2.** Relationship of temperature with time of Lower Chamber - PVC Roof and G.I Roof

Figure 2 shows the behavior of ambient temperature with time of lower chamber for both PVC and GI roofs. Initially at time 0, both chambers had similar ambient temperature readings of 30°C. Ambient temperatures on lower chamber of both PVC and GI increased with time but GI roof always maintained a higher ambient temperature than the lower chamber with PVC roof. As shown in figure 2, the curve of PVC roof is consistently lower than GI roof which concludes that crown uPVC roof has lower thermal conductivity than GI roof, which makes it a better roofing option.



## ANNEX A



**Picture A.1.** ThermoBox Experimental Set-up



**Picture A.2.** Cracked glass on GI roof upper chamber @ time = 25 minutes



**Picture A.3.** Uncracked glass on PVC roof upper chamber @ time = 25 minutes

Aside from being heat resistant and non-corrosive, our uPVC roof is also impact resistant. A test was conducted by using a fabricated falling weight testing machine which is a device used to determine the impact strength of our uPVC roof through their resistance to external blows. Two types of impact tests were conducted on our uPVC roof - Bullet and Ball impact tests. The bullet weighs 0.755kgs while the ball is much heavier which weighs 2.495kgs (see Annex B for pictures of the actual set-up).

Crown CorrWave and StrongRib having thickness of 1.5mm, 2.0mm and 2.5mm each were used as test specimen for both bullet and ball impact. Different falling heights for bullet and ball impact were carried out in this test (1.0 meter, 1.5m, 2.0m, 2.5m, and 3.0m).

**Table 2.** Bullet Impact Data

Impact Falling Height	<b>BULLET IMPACT</b> (mass = 0.755kgs)					
	<b>Crown CorrWave (Thickness)</b>			<b>Crown StrongRib (Thickness)</b>		
	1.5mm	2.0mm	2.5mm	1.5mm	2.0mm	2.5mm
1.0 Meter	Passed	Passed	Passed	Passed	Passed	Passed
1.5 Meter	Passed	Passed	Passed	Passed	Passed	Passed
2.0 Meter	Passed	Passed	Passed	Passed	Passed	Passed
2.5 Meter	Passed	Passed	Passed	Passed	Passed	Passed
3.0 Meter	Passed	Passed	Passed	Passed	Passed	Passed

As shown in table 2, both crown CorrWave and crown StrongRib at different thickness withstand the external blows of a bullet impact at different falling heights. The higher the falling height of the object, the bigger the impact force it will supply. But as a result, our product resisted the bullet impact force and did not break nor conatin any holes even in a 3.0meter falling height.

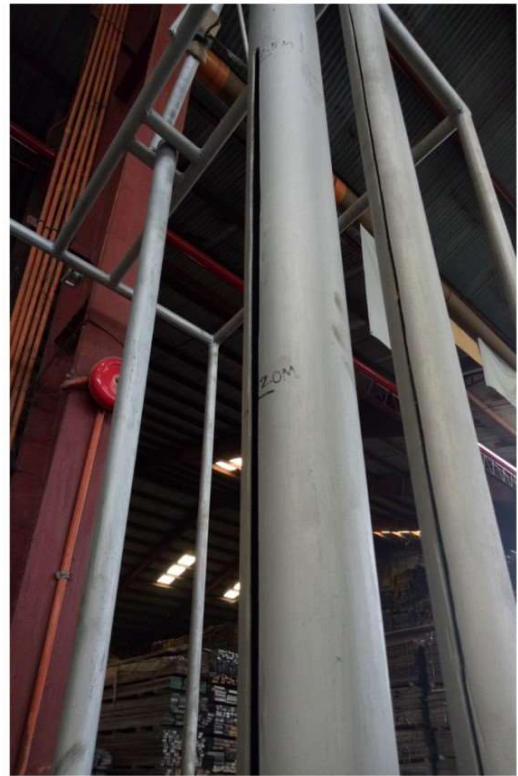
**Table 3.** Ball Impact Data

Impact Falling Height	<b>BALL IMPACT</b> (mass = 2.495kgs)					
	<b>CorrWave (Thickness)</b>			<b>StrongRib (Thickness)</b>		
	1.5mm	2.0mm	2.5mm	1.5mm	2.0mm	2.5mm
1.0 Meter	Passed	Passed	Passed	Passed	Passed	Passed
1.5 Meter	Passed	Passed	Passed	Passed	Passed	Passed
2.0 Meter	Passed	Passed	Passed	Passed	Passed	Passed
2.5 Meter	Passed	Passed	Passed	Passed	Passed	Passed
3.0 Meter	Passed	Passed	Passed	Passed	Passed	Passed

Meanwhile, similar to falling height - the heavier the falling object, the greater impact force it will supply. Ball impact has greater impact force compared to bullet impact as it weighs much heavier, however, our crown roofing product still withstand the external blows of ball impact at different falling heights.

Therefore, it is conclude that our crown uPVC roofing is effective in resisting impact. Our product did not even break nor contain any holes from both bullet and ball impact at different falling heights.

## ANNEX B



**Picture B.1.** Fabricated Falling Weight Testing Machine



**Picture B.2.** Bullet Impact



**Picture B.3.** Ball Impact