



HMC Polymers

A Most Admired Company

An associate of PTTGC & LyondellBasell

FY2021 Update

Resilient financial performance
with care and share to society



29 March 2022



Medical Personal Protective Equipment

Leveraged polypropylene properties for medical personal protective equipment

HMC Donates Level 3 Isolation PPE

16,500 set for medical personnel and frontline workers



Properties of HMC PP film isolation PPE



The HMC PP impact copolymer, *Moplen EP310D*, which provides excellent toughness and chemical resistance as the chosen material for the PP film Isolation PPE

complies with PPE Level 3 in line with the ANSI/AAMI PB70 standard. As part of the PPE Level 3 qualification, the PP film has the required hydrostatic resistance $> 200 \text{ cmH}_2\text{O}$ and impact penetration $< 1.0 \text{ g}$. Capable of use in moderate risk condition e.g., ER, COVID-19 patient.

The PP film isolation PPE made by blown film process resulting to high strength and excellence clarity. The ultrasonic seal was chosen to make this PPE providing high seal strength and no sewing hold to avoid penetration of chemical or body fluids.



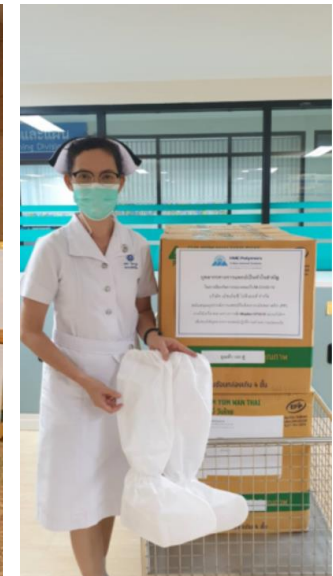
HMC Polymers & Aeroklas

Combine for field beds made of PP *Moplen EP310D* distributed to nationwide field hospitals

- No accumulation of bacteria. To make it ready for the next patient, it can be easily cleaned with commercially available detergents or alcohol. The HDPE/PP material does not absorb water or other liquids.
- Made of high quality HDPE/PP plastic, which is the same material used to manufacture patient beds for all leading general hospitals.
- Design patent registered
- Environmentally friendly material, which can be recycled.
- Light-weight, strong, durable, with a service life lasting many years.
- Its sturdy construction can support weights of up to 200 kg.
- Easy to set up, assembly takes less than 5 minutes, with only a screw driver required.



Isolation gown and shoe cover made of HP561R



2021 Key Highlight

Resilient financial performance with care and share to society

Announced new Leadership Team for new PP4 Plant readiness and global market expansion



Achieved EBITDA margin at 15% and net profit at 2,900 mTHB

Achieved Specialty Product and Differentiated Product (SPDP) sales at 55% of total sales volume



Reduced household greenhouse gas emissions from 2019 to 2021 by up to 32,394 kgCO2 (equivalent to the carbon dioxide absorption of 3,599 trees) with Low Emission Support Scheme by Thailand Greenhouse Gas Management Organization (Public Organization)

Leveraged polypropylene properties for medical personal protective equipment to support medical requirement in the COVID-19 pandemic





2021 Awards and Certificates

- **MiT: Made in Thailand product certification** by the Federation of Thai Industries for 4 main product categories: Homopolymer, Random Copolymer, Impact or Block Copolymer and Terpolymer.
- **IPHA: Industrial and Production Hygiene Administration Certificate** by The Federation of Thai Industries for our stringent health standards in the COVID-19 preventive measures.
- **The Occupational Safety and Health National Level (Gold Level Certificate)** as part of the Thailand Labor Management Excellence Award 2021 by the Thai Ministry of Labor
- **Green Industry Award Level 4: (Green Culture)** which was sponsored and endorsed by the Thailand Ministry of Industry
- **CSR-DIW Continuous Award 2021** for PP and PDH Plants recognized by the Department of Industrial Work, Thailand Ministry of Industry

Vision and Mission

Vision

To be A Most Admired Company and Asia's Preferred Partner



Mission

To capture and deliver the full potential of polypropylene and HMC for our customers

We deliver **exceptional value** by bringing **the latest technology** that improves the **quality of people's lives**.

We **differentiate** our business through **customer service and operational excellence**
based on **ethical and sustainable practice and uncompromised safety**.



1. Financial Performance and Projection

2. Strategic Directions

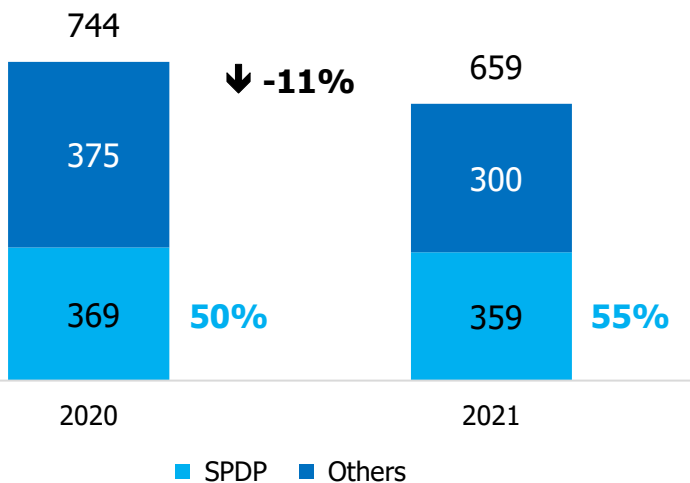
3. Operation Highlights

4. Market Outlook

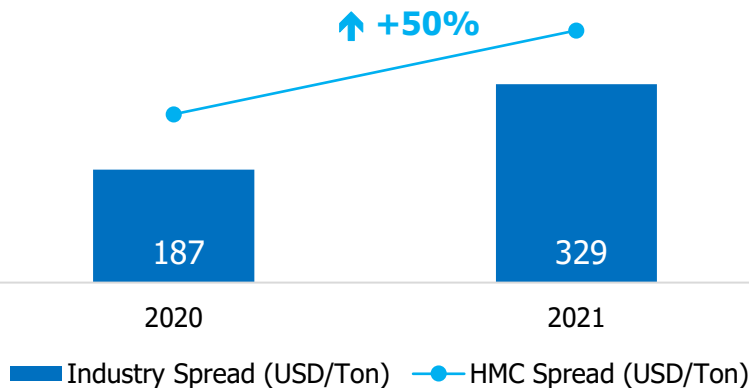
2021 Financial Performance

Substantial increase in margin led by higher spread of high-value-added products

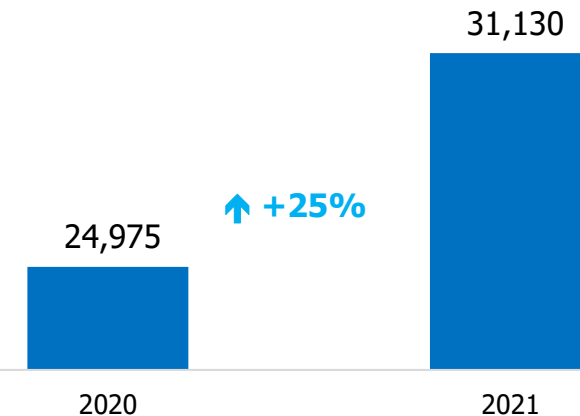
Sales Volume in Kilo Tons



Polypropylene - Propylene Spread in USD



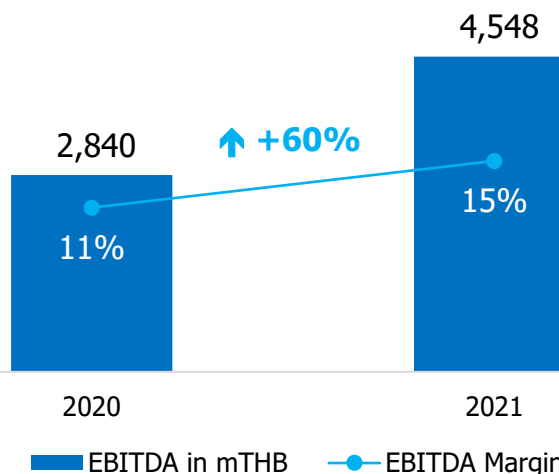
Revenues from Sales in mTHB



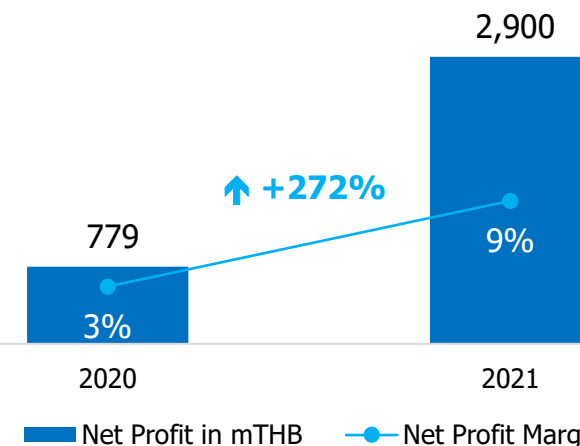
Highlights

- Substantial increase in margin led by higher spread due to:
 - US supply shortage from winter storm;
 - China's short supply from its "dual control" to reduce energy intensity and to limit total energy consumption; and
 - demand recovery from easing COVID-19 measures.
- Achieved SPDP sales at 55% of total sales volume and EBITDA margin of 15%.

EBITDA in mTHB



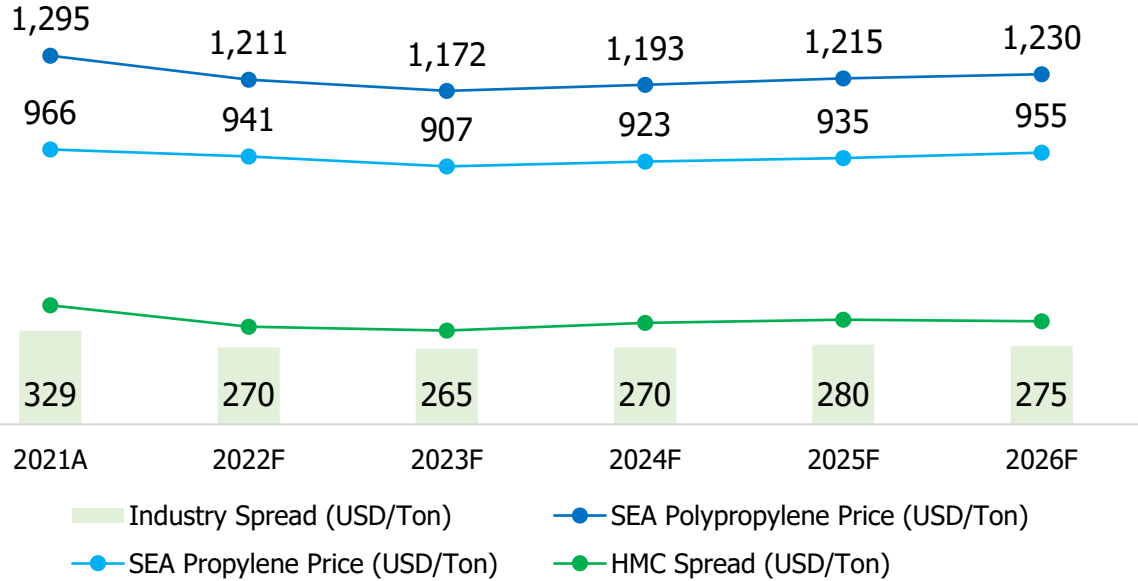
Net Profit in mTHB



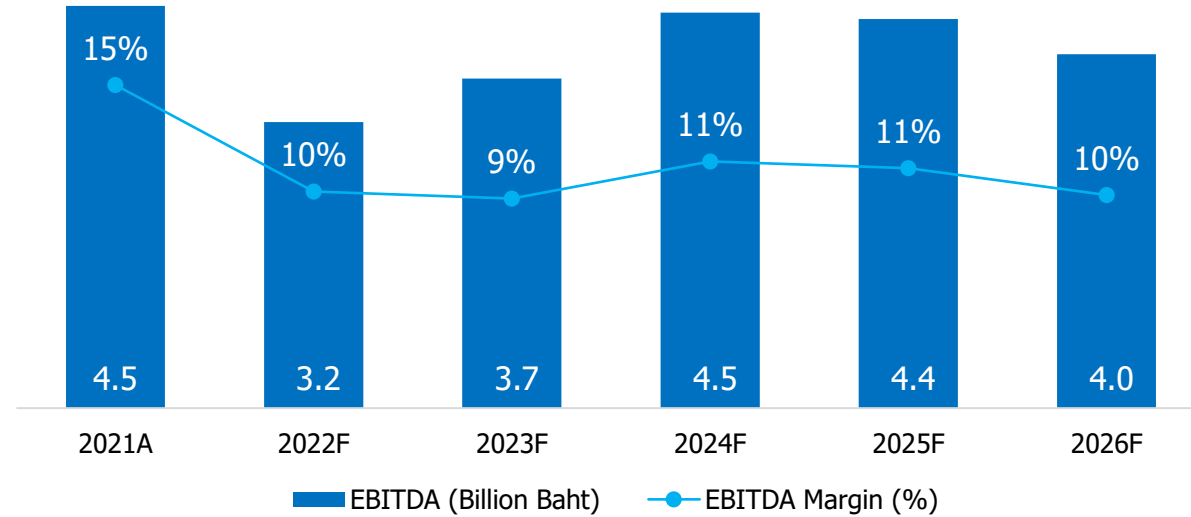
5 Years Financial Projection

Escalate growth in specialty and differentiated products

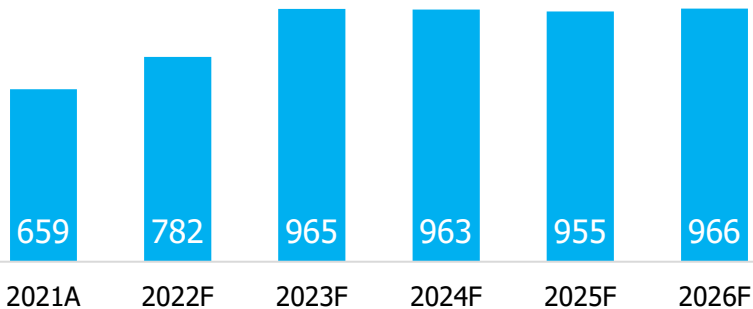
Propylene and Polypropylene Price and Spread



EBITDA and EBITDA Margin



Sales Volume (Kilo Tons)



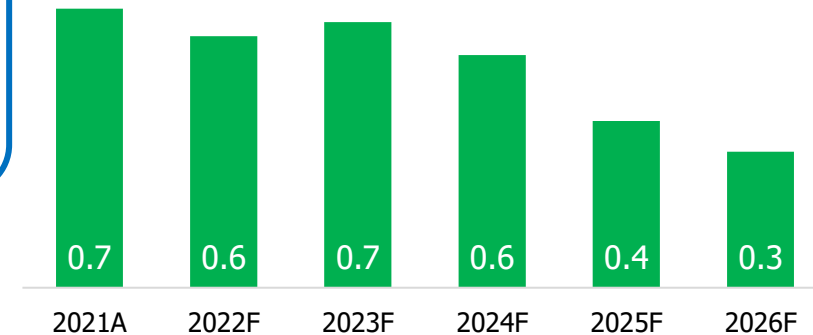
Highlights

- PP4 Project is planned for start-up in 2022H2.
- 2 *Spherizone* Plants to support specialty and differentiated products with higher premium.
- PDH major turnaround in 2023 and then 2026.

Disclaimer

This Financial Projection was prepared in October 2021. The short-term impact from a conflict between Russia and Ukraine has not yet been included in the assumption.

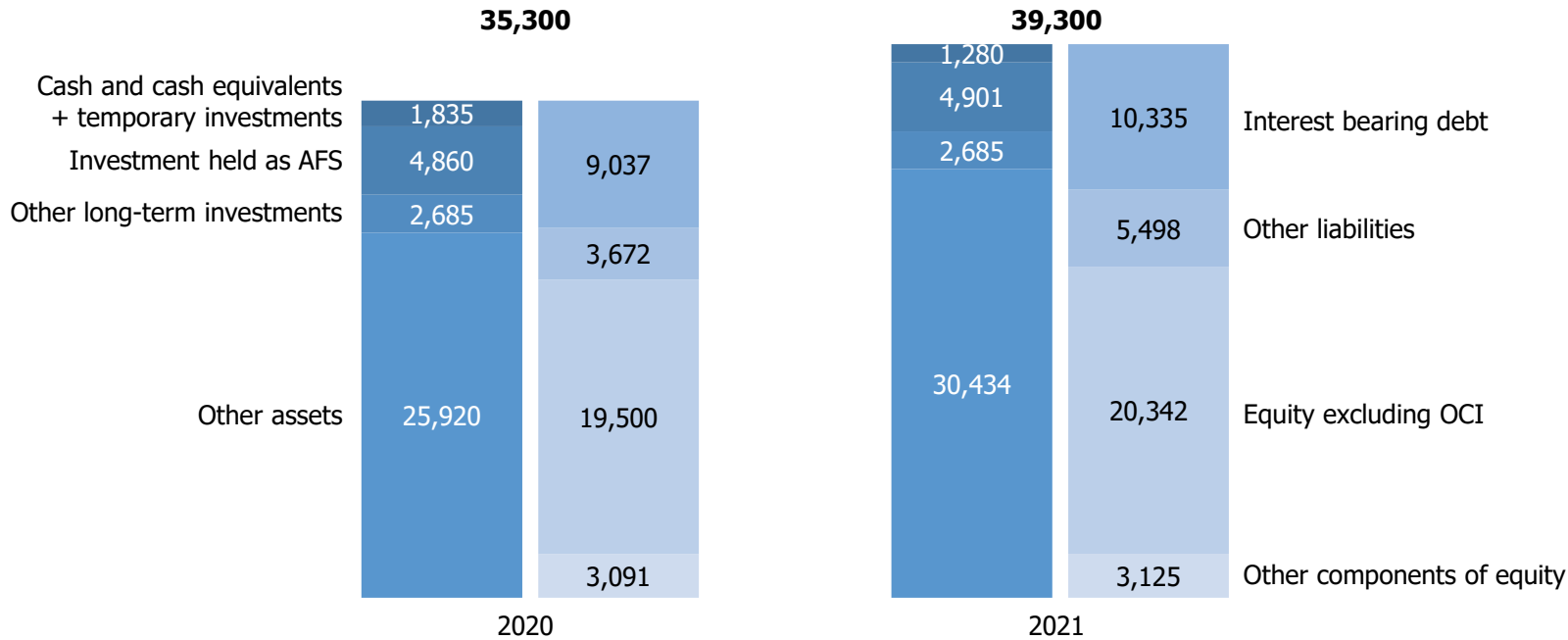
Net IBD to Equity (times)



2021 Financial Position

Robust financial standing with strong capital base and low leverage ratio

Financial Position in mTHB



Fitch Ratings **A-(tha)**
30 April 2021

Capital Structure

- Net IBD to Equity $\leq 1.0x$
- Net IBD to EBITDA* $\leq 2.0x$

* During PP4 construction, Net IBD to EBITDA will be increased. Net IBD to EBITDA will decrease to below 2.0x by 2025.

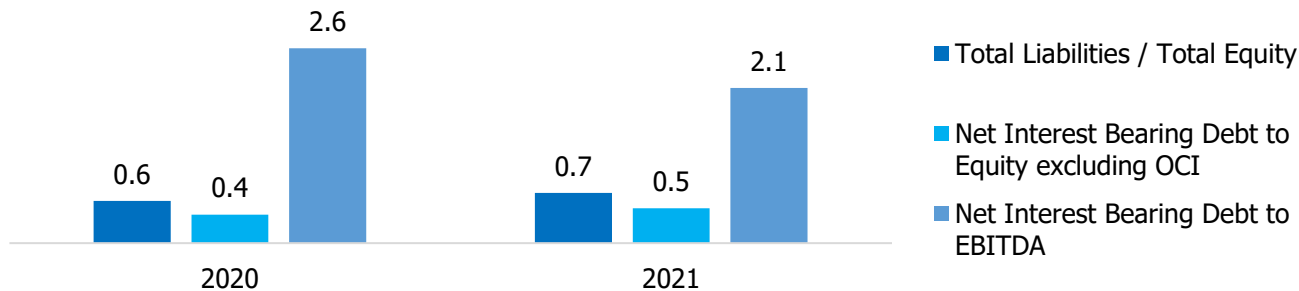
Liquidity

- Voluntary cash reserve for next loan installment with minimum cash around Baht 1 billion
- Committed revolving credit facility of Baht 4 billion available for use

Dividend

- Free cash available after reserved funds as required by law, current and due debt obligations, ongoing expenditures and CAPEX.

Financial Ratio



Agenda



1. Financial Performance and Projection

2. Strategic Directions

3. Operation Highlights

4. Market Outlook

HMC Strategic Direction



Market Leading Innovation – *Capture business opportunity by leveraging our asset utilization, innovation and marketing*

- Become **an innovation leader** in strategic applications such as consumer, industrial and medical sectors.
- Expand and **diversify product portfolio** in durables & industrial, transportation and construction sectors.
- Leverage **capabilities of new PP Line IV** for strategic products including flexible packaging, hygiene products, pipes and in-line compounding.



Outstanding Customer Orientation – *Escalate growth in specialty and differentiated applications*

- Ensure long-term growth by profitable **product mix and sales channels**.
- Continue customer-oriented approach to establish **partnership and co-development** with downstream strategic customers.



World Class Safety and Operational Excellence – *Aim towards world class operational excellence*

- Create differentiation through **“Customer Focus”**.
- Uplift **integrated planning and supply chain system** allowing secured and competitive feedstock.
- Exploit **digitalization tools** to accelerate business growth such as HMC Digital Business Process.
- Step up **sustainability scheme** and drive circular economy.



The Most Result-Oriented, Experienced and Engagement People – *Strive for excellence in employee development*

- Enhance HMC Culture – **4 Core Behaviors**: Customer Focus, One Team, Strive for Excellence and Innovation.
- **Drive people expertise**, agility and growth to align with company’s strategic direction and investment.
- Implement **career development plan**.

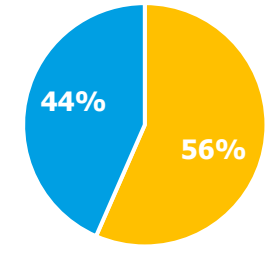
Upstream Integration and Diversified Feedstock



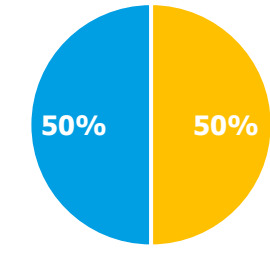
through PDH plant and secured & diversified long-term contracts with suppliers



1,060 KTA in 2022H2
The Largest PP Producer in The Region



Current



Target 2030

■ Domestic
 ■ Export



HMC Polymers



Direct Sales and Agents



Product Portfolio

Market Leading Innovation

Growth in sales of specialty and differentiated products

Trends capture

- Medical/ Healthcare
- Personal Protective Equipment
- Food & beverage packaging/container

Moplen HP561R – 25 MFI Homo
Moplen HP562T – 60 MFI Homo



Increase in takeaway / food delivery
Thermoformed & TWIM containers



<p>Purell RP171G (Gamma ray sterilization grade) Purell RP271G (ETO sterilization grade)</p> <p>Key features:</p> <ul style="list-style-type: none"> • Superior processability • Excellent barrier properties • High clarity • High MFI <p>Applications:</p> <ul style="list-style-type: none"> • Syringes • Blood collection tubes • IV containers • Blood storage bags • Blood filters • Blood tubing • Blood connectors • Blood containers • Blood tubing • Blood connectors • Blood containers 	<p>Purell RP271G 1.7 MFI PP random copolymer</p>	<p>Purell RP171G 1.5 MFI copolymer specially designed for high softness and clarity</p>	<p>Purell RP271M 8 MFI PP random copolymer</p>
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Long-term sustainability

- Mono-material
- Harmless chemicals contained

NON-PHTHALATE PP GRADES

Low migration from packaging into food

More food safety and regulation compliance

Global brands in Western countries moving towards BPA free and Non-phthalate PP resins

More health conscious customers will patronize next generation non-phthalate plastic materials

Higher heat resistance

Better hot-fill performance

Excellent stiffness & impact balance

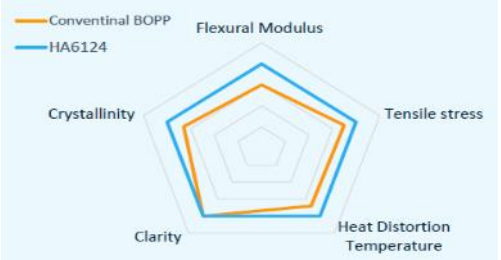
Higher top-load strength for high stackability

Consumer safety

BOPP film for recyclable laminate

- ✓ High stiffness
- ✓ High temperature resistance
- ✓ High barrier

Adstif HA6124



More advanced products and improvement

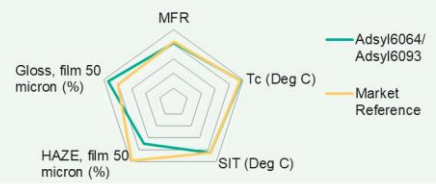
- Low SIT film
- Pipe grade: PP-HM, PP-R and future with PP-RCT
- Dielectric BOPP film
- Soft spunbond
- High MFI for compound
- Oil & heat resistance
- Higher clarity
- Single grade formulation

- ✓ Low SIT
- ✓ Good seal strength
- ✓ Broad processing window

Adsyl 6064 / 6093

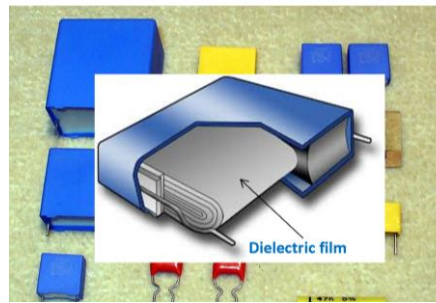
Key Features of Adsyl resins for CPP

- Low SIT of 107-110 °C on CPP films
- Good seal strength
- Good optical properties
- Suitable for metallizable films



Polypropylene used for Dielectric Film needs to meet stringent requirements regarding

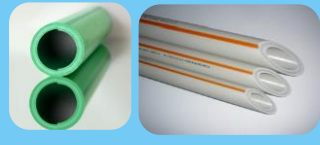
- Purity and catalyst residues
- Stiffness and heat resistance
- Processability



Hostalen PP H5416T PP-R pipe for heating and plumbing



PP-RCT Pipe Pressure pipe



Moplen EP6128 (Under Development) High Flow PP Grade as Building Blocks for Automotive Compound



PRODUCT SOLUTION

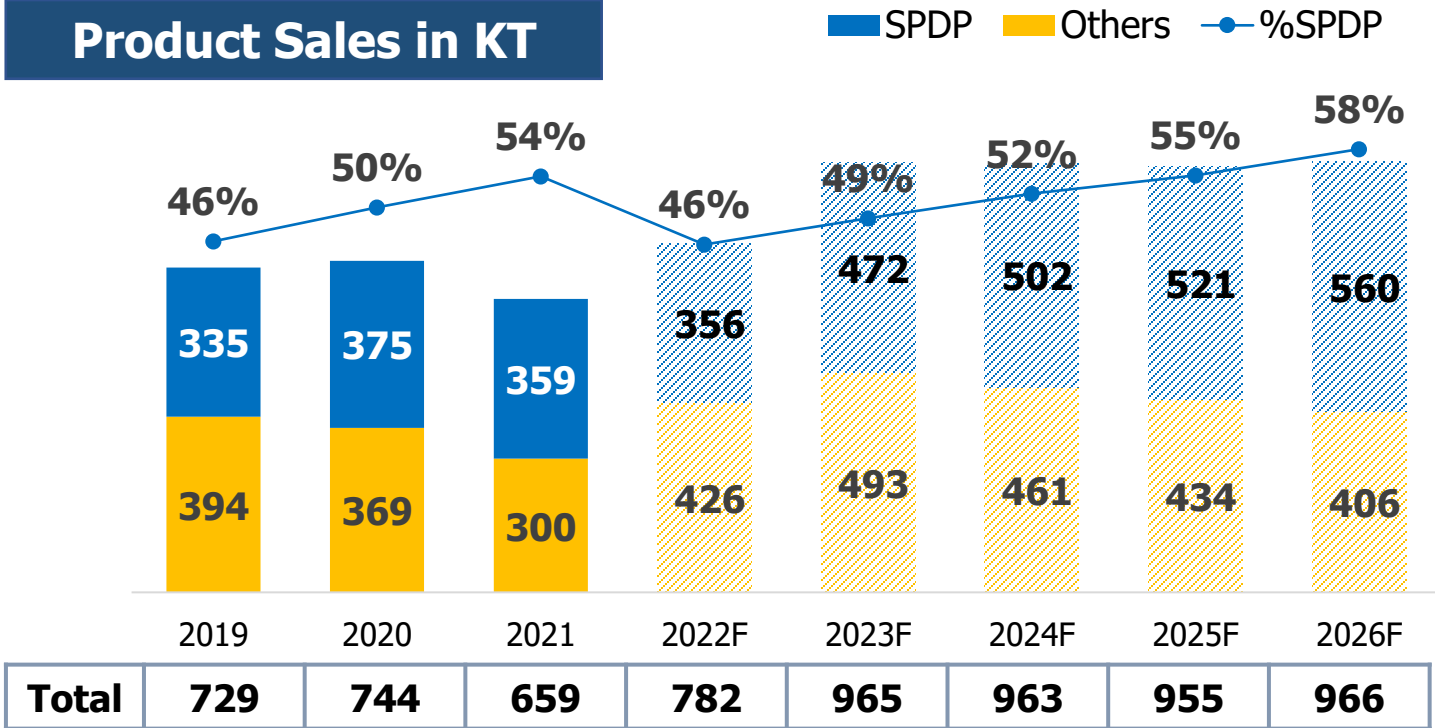
- 01 HOMO Grades for Glass Filled Compounds
- 02 HECO grades as Blending Components for High MFI Automotive Compounds
- 03 Fractional MFI grades for profiles or extruded components

Product Strategy

Target to achieve 70% SPDP in 2030

- Decrease in product sales in 2021 as a result of an unplanned shutdown from power outage in Apr 2021.
- However, HMC gained higher %SPDP in 2021 from optimizing commodity portfolio and drove SPDP by securing renewal contract, new market diversification and maintaining key market base.
- During the start-up of Line IV, commodity grades will be churned out and reduce %SPDP.
- Afterwards, %SPDP is rising in response with growing demand of innovative products.

Product Sales in KT



Specialty Product (SP)

is disruptive product, low or no other competitors, high entry barrier, high profitability end application and low-price sensitivity

Differentiated Product (DP)

is selected product, high growth, limited producers and superior profitability of end application.

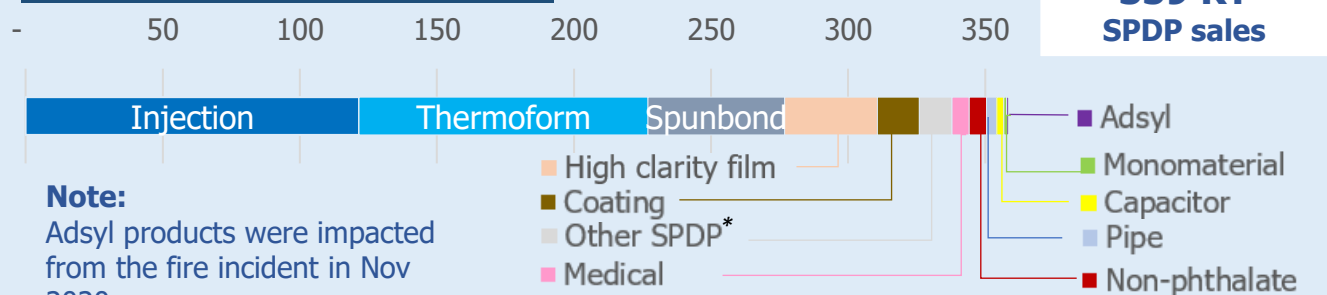
Commodity

is general commodity product, low entry barrier, high competition, low value end application and high price sensitivity.

Non-Prime

is transition products and off-specification.

SPDP sales in 2021 (KT)



Note:
Adsyl products were impacted from the fire incident in Nov 2020

*Remark: Other SPDP includes obsoleted grades

Product Strategy

PP4 Product Slate



Start-up plan: 2022H2



Initial product list for start-up



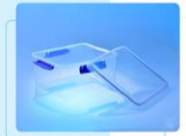
Film

- *Adsyl 6093*
- *Clyrell RC112L*
- *Clyrell RC221L*
- *Clyrell RC6131*
- *Moplen HP525J*

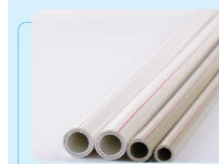


Injection

- *Moplen HP500N*
- *Moplen RP348N*
- *Moplen RP242G*
- *Moplen EP540N*



PP4



Pipe

- *Hostalen PP H5416T*
- *PP-RCT*

Raffia

- *Moplen HP400H*



HMC as A Most Admired Company

Achieving sustainability through Environmental, Social and Governance



- In November 2021, we received the **Green Industry Award Level 4: (Green Culture)** which was sponsored and endorsed by the Thailand Ministry of Industry.
- This award is a recognition that we are an organization which places environmental considerations as a top priority for all aspects of its business operations as well as a key aspect of its corporate culture.
- Green Industry refers to industrial entities that are committed to the continuous improvement of production processes, environmental management and business operations throughout the supply chain that are environmentally and socially responsible.



HMC as A Most Admired Company

Achieving sustainability through Environmental, Social and Governance



- HMC has consecutively obtained this CSR-DIW Award since 2010 from Department of Industrial Works as our belief in Care and share for the better life.
- A variety of sustainability development initiatives that are currently active and expanding including Circular Economy
- With Circular Economy, we could gradually reduce household greenhouse gas emissions through food waste and plastic waste segregations for further utilization as fertilizer and plastic recycling.



HMC as A Most Admired Company

Achieving sustainability through Environmental, Social and Governance



International Anti-Corruption Day 2021



Gifts, Entertainment and Travel Policy

- In December 2021, HMC Polymers was presented with a Thai Chamber of Commerce Outstanding Ethics Award at the “TCC Best Awards 2021: Seize opportunities, navigate through crisis with ethics”.
- We are committed to prevent corruption and fraud by building good governance culture among employees. Both newcomers and existing employees are continuously updated on Anti-Fraud Policy and Gifts, Entertainment and Travel Policy to ensure that ethical business conduct can be expected.

Agenda



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PP4 Project

The most advanced PP plant ever built



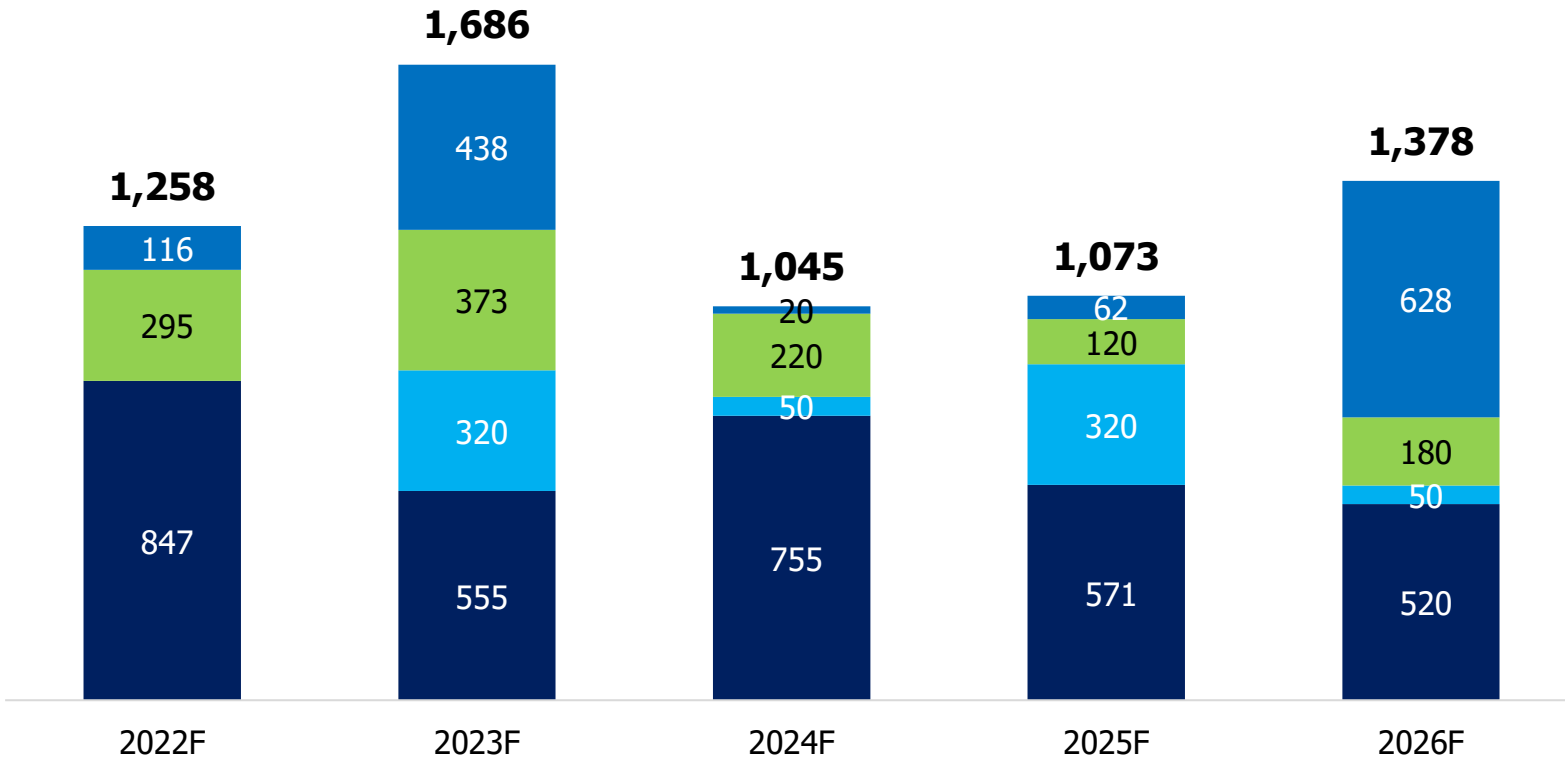
- The new PP4 Plant is now well underway bringing HMC's total PP capacity to 1,060 KTA further boosting its position as the largest PP producer in ASEAN.
- Expected PP4 start-up in 2022H2
- Focus on innovative products exploiting the new generation technology and catalyst benefits
- More specialty and differentiated products to the growing market for flexible packaging, hygiene products and pipes with higher margins

5 Years CAPEX Plan

Capital projects to enhance Safety, Reliability, Efficiency and Sustainability

in Million Baht

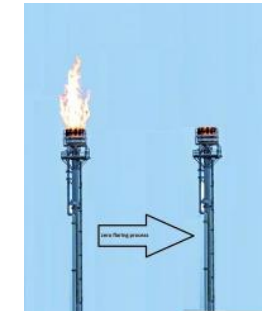
■ Maintenance and minor improvement project
 ■ PDH turnaround
■ Business investment
 ■ PDH catalyst and absorbent
 Total



Note: PP4 Project was excluded from the above chart.

CAPEX Highlight

- PP Zero Flare from 2022 to 2024 with the value of Baht 550 million aiming CO₂ emission reduction and monomer yield enhancement for sustainable utilization.



- PDH major turnaround in 2023 and will extend turnaround interval from 2 years to ~3 years, then next turnaround will be shifted to 2026.

Agenda



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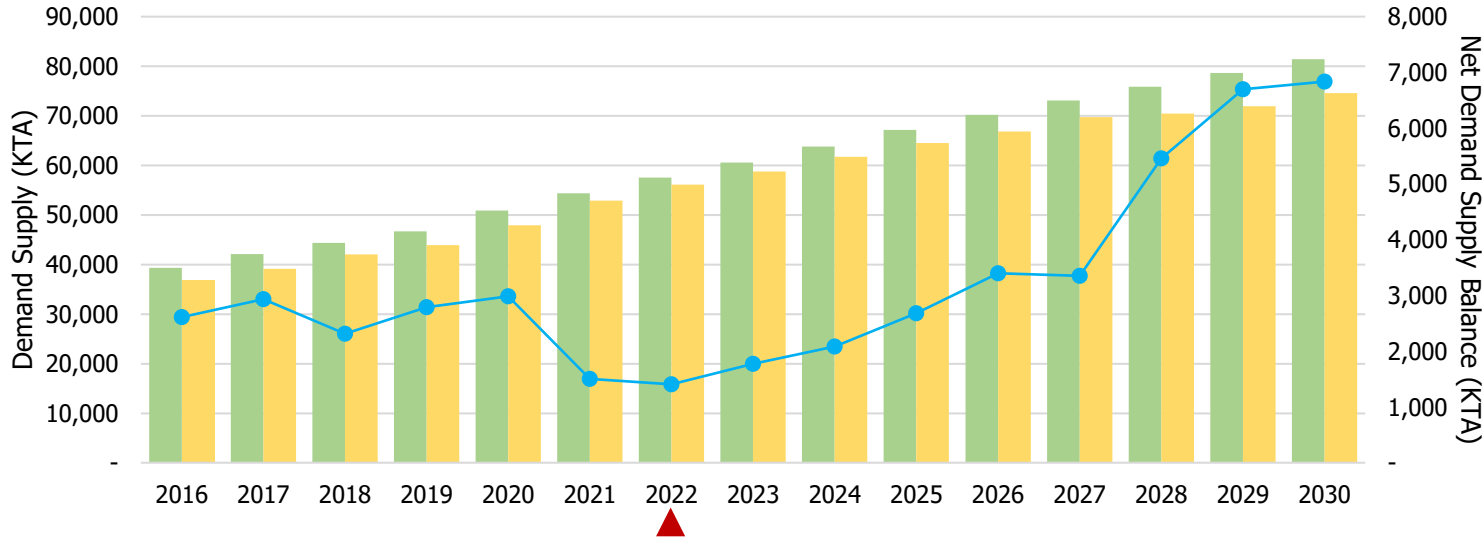
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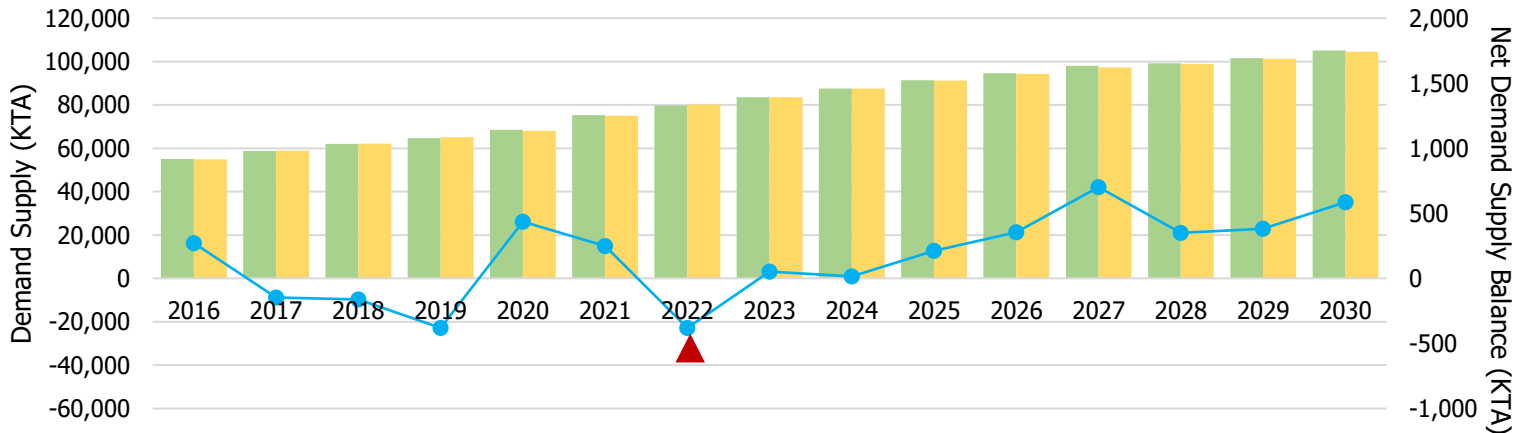
Polypropylene and Propylene

Demand Supply Balance in Asia Pacific

Polypropylene Demand and Supply in Asia Pacific



Propylene Demand and Supply in Asia Pacific



Source: IHS

■ Demand
 ■ Supply
 ● Net Demand Supply Balance

Polypropylene Market

- In 2021, changes in consumer behavior resulting from the impact of COVID-19 led to demand growth for PP fiber, food packaging, film and sheet products.
- Continual increase in consumption of PP in 2022 is expected as a result of a combination of growth in traditional uses (e.g. packaging and medical application), recovery of automotive segment and new emerging EV application.
- On the capacity development, the impact of COVID-19 and an uncertainty about the economic outlook have delayed the start-up of several new PP plants in Asia Pacific.

Propylene Market

- Propylene market in Asia Pacific is expected to be relatively tight during turnaround season.

Disclaimer

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A Most Admired Company









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