

# The Aluminum Association Presents: 2015 Ducker Worldwide Automaker Survey

**DRIVING INNOVATION**  
// AUTOMOTIVE ALUMINUM FOR THE MASSES //

A SURVEY OF AUTOMAKERS CONDUCTED BY DUCKER WORLDWIDE CONFIRMS FUTURE TRUCKS, SUVs AND SEDANS WILL BECOME LIGHTER, SAFER AND MORE EFFICIENT WHILE MAINTAINING SIZE

**BY 2025** // WHAT'S COMING?

7/10 NEW PICKUPS WILL HAVE AN ALUMINUM BODY

**Automakers  
Driving Forward  
with Aluminum**



*An Aluminum Association Webinar*

[DriveAluminum.org/ducker](http://DriveAluminum.org/ducker) | [@DriveAluminum](https://twitter.com/DriveAluminum)

# Aluminum Transportation Group (ATG)



# 2015 Survey Results: Aluminum Use by North American Automakers

## Discussion Outline

- **About Ducker Worldwide & 2015 Study**
- **Aluminum Growth: 2015 – 2025**
- **Emerging Aluminum Growth**
- **Questions**



DUCKER WORLDWIDE  
*Advancing Growth*



Download the executive summary:  
[DriveAluminum.org/ducker](http://DriveAluminum.org/ducker)

# Ducker Worldwide – Introduction

Market Intelligence and Research

Strategy Consulting

Transaction Advisory and Diligence

## Ducker Facts

- 52 Year history
- 150 Team members worldwide
- 275 End-use markets served
- 34 Languages spoken
- 98 Countries where they have experience

## Global Footprint



## Industry and Sector Experts

Automotive  
OEM  
Aftermarket

Industrials &  
Raw Materials

Building Products &  
Materials

Business Services

Heavy Equipment &  
Capital Goods

Healthcare Device &  
Services

# Aluminum Study Methodology – 7<sup>th</sup> Edition

## Two Pronged Simultaneous Approach



### Study Attributes

- Six-month market research
- “Bottom up” forecasting process

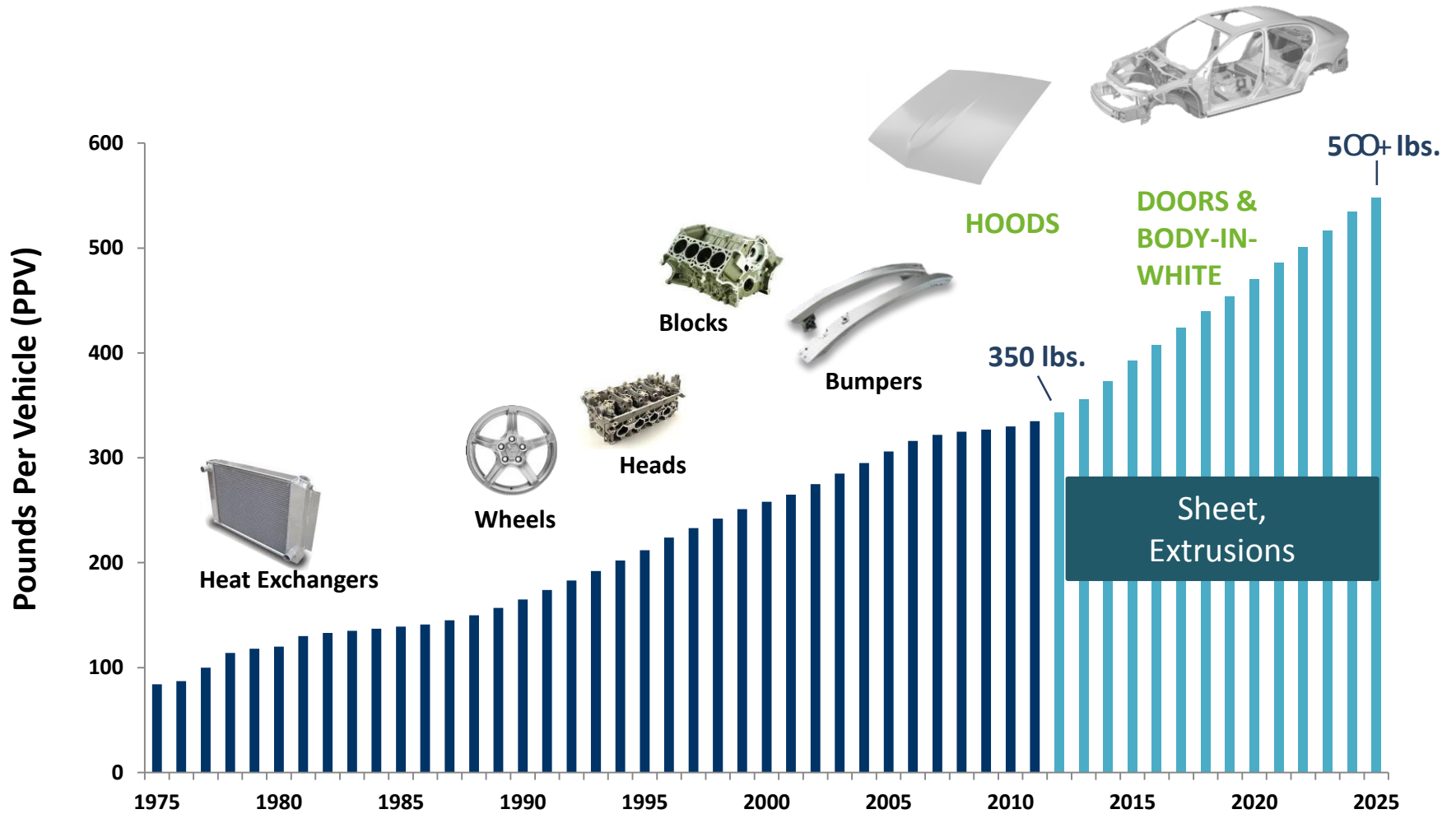
#### TEAM A

- Forecasts NA vehicle production
- Develop master part weight and product form file
  - Domestic NAFTA production
  - Manufacturer / Model specific
  - Yearly to 2025
  - Actual / estimated part material, process, weight
- Recalculate 2012 content by vehicle and component with latest changes in part weights and penetrations
- Fieldwork on industry trends for key vehicle components
- Develop trend forecast of material use for most vehicle components

#### TEAM B

- OEM / Tier 1 interviews - materials use plans
- Estimate future penetration for alternative materials
- Estimate material breakdown by product and product form
- Determine final content breakdown by component, vehicle segment and product form

# 50 Years of Automotive Aluminum Growth

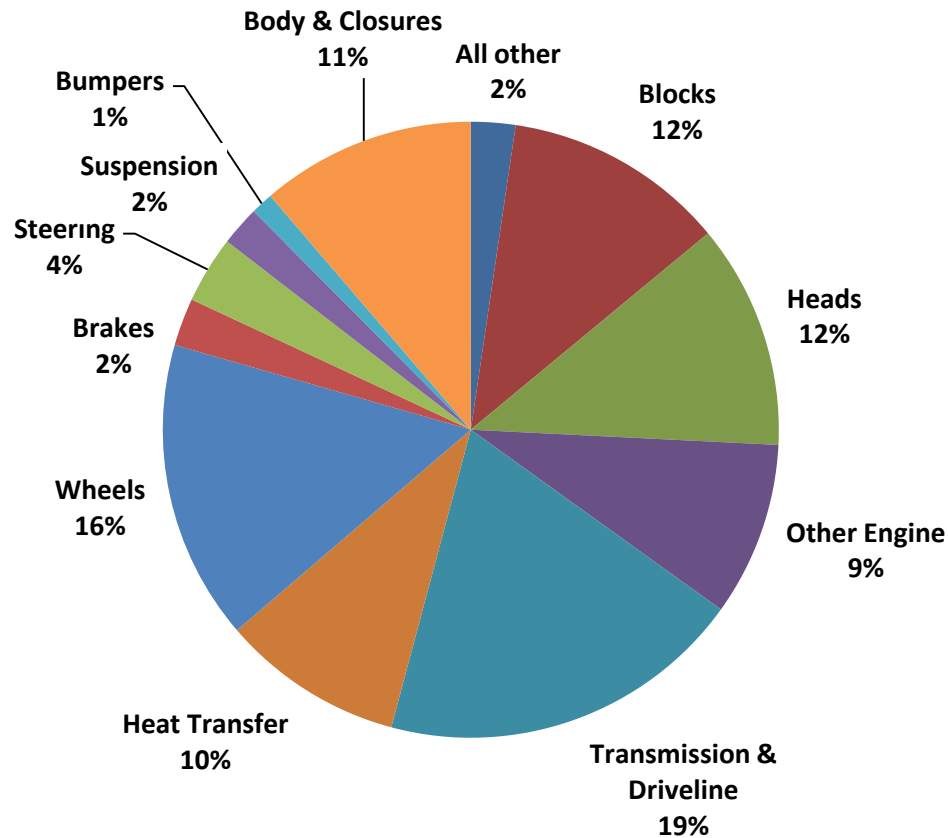


# Ducker 2015 - Key Aluminum Findings

- **40 year growth trend continues**
  - (+7 lbs. per year)
  - accelerating
- **Highest growth - 2015**
  - First high-volume automotive body and structures  
F-150 pickup truck all-aluminum body
  - sheet and extrusions - body, closures
- **Continued growth**
  - non-body applications: castings and extrusions
- **Aluminum content**
  - 10% of average curb weight (393 PPV)

# 2015 Total Aluminum Content

## Aluminum Component Share by Weight



11%

Body & Closures

73%

Castings

33%

Engine

6.9 Billion Pounds



# 2015 Aluminum Content by Segment

## A/B Segment

Fiat 500  
Ford Fiesta



252 lbs.  
3% of Production

## MPV Segment

Honda Odyssey  
Chrysler Town & Country



396 lbs.  
4% of Production

## C Segment

Ford Focus  
Honda Civic



274 lbs.  
17% of Production

## SUV Segment

Chevy Suburban  
Jeep Grand Cherokee



410 lbs.  
33% of Production

## D Segment

Chevy Malibu  
Dodge Charger  
MUSTANG



363 lbs.  
21% of Production

## VAN Segment

Dodge Sprinter  
Ford Transit



273 lbs.  
2% of Production

## E Segment

Cadillac XTS  
STING RAY



547 lbs.  
2% of Production

## PU Segment

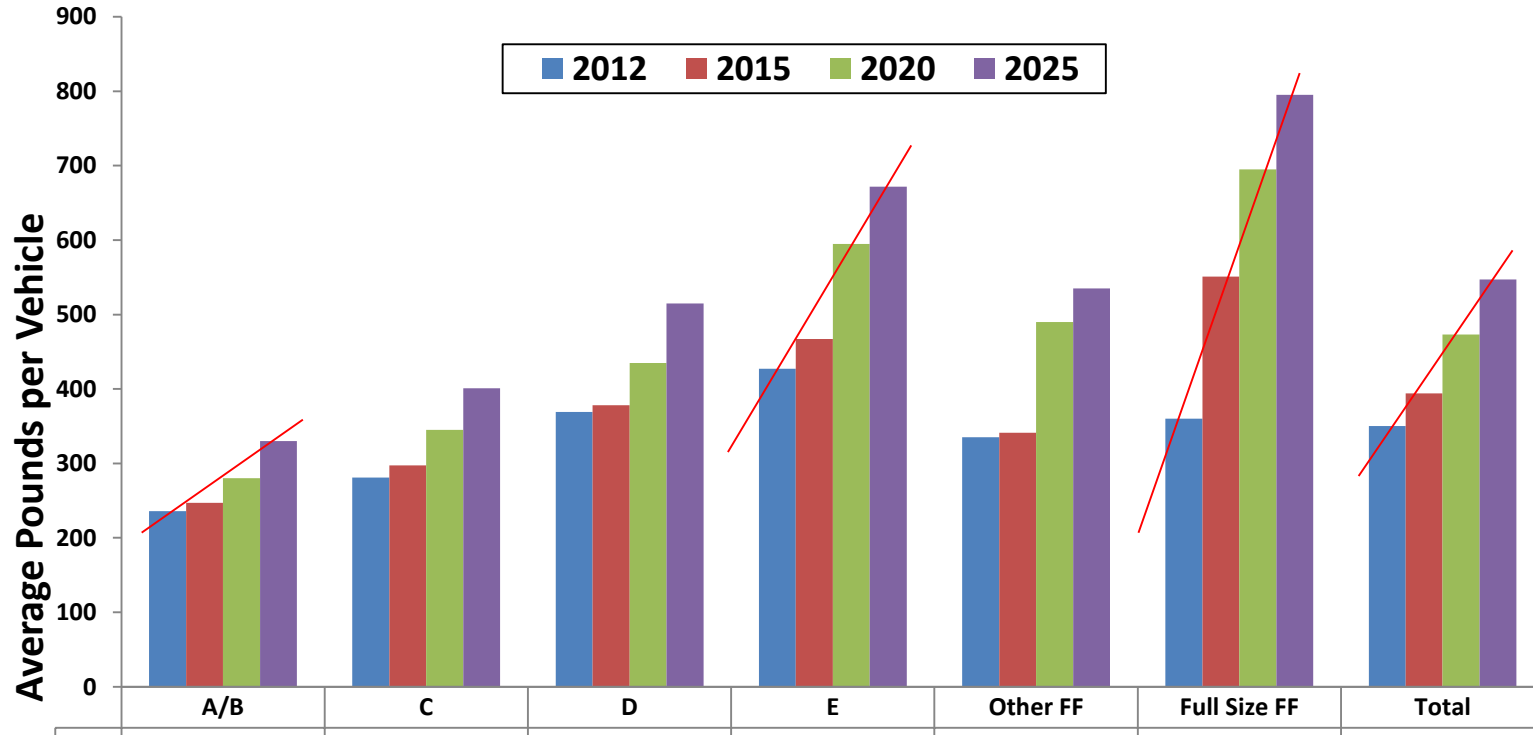
Ford F150  
Ram 1500



549 lbs.  
17% of Production

# Vehicle Segment Analysis

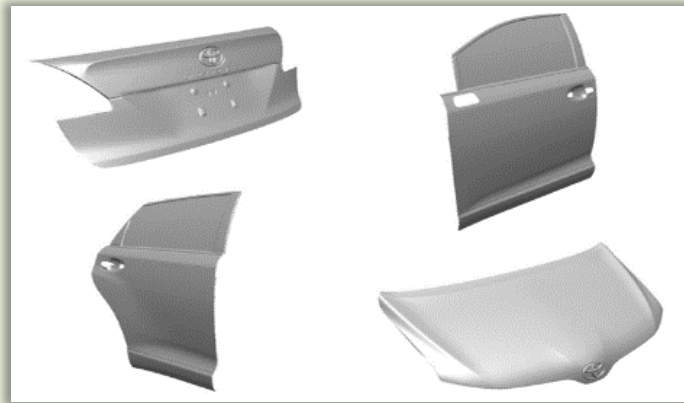
## Aluminum Content Change by Vehicle Segment



# Ducker 2025 - Key Aluminum Projections

- **50 years uninterrupted growth**
  - last 10 years: +14 lbs. per year
- **Main aluminum content increase**
  - body sheet and extrusions
- **7 out of 10 new pickup trucks**
  - aluminum-bodied
- **Continued growth in non-body applications**
  - castings and extrusions
- **Aluminum content**
  - 16% of average curb weight (547 PPV)
  - 60% increase over 2015

# Emerging Growth Segment: Aluminum Closures and Bodies



## ALUMINUM PENETRATION BY 2025

**85%**  
HOODS



**18%**  
COMPLETE BODIES



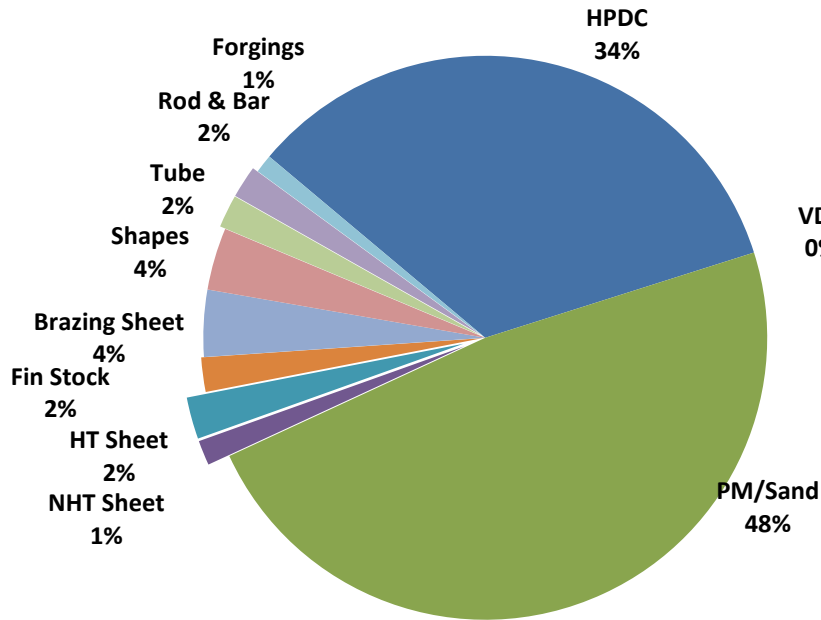
**46%**  
DOORS



# 2012 – 2025 Aluminum Products Transition

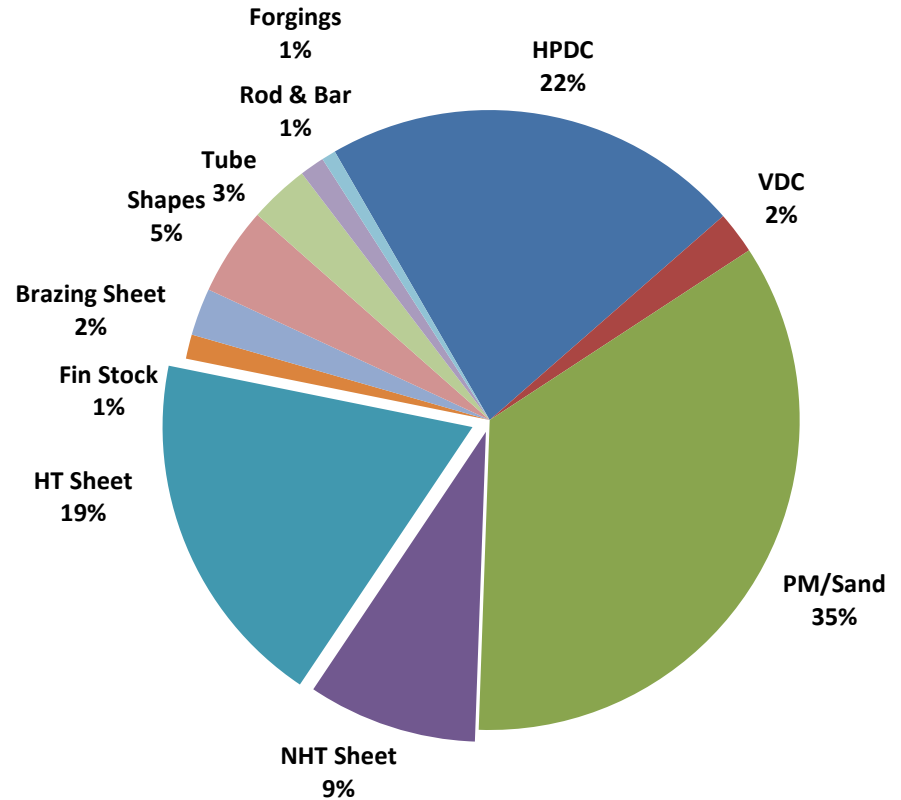
## Mill Products: 18% - 41%

2012



18% Mill Products

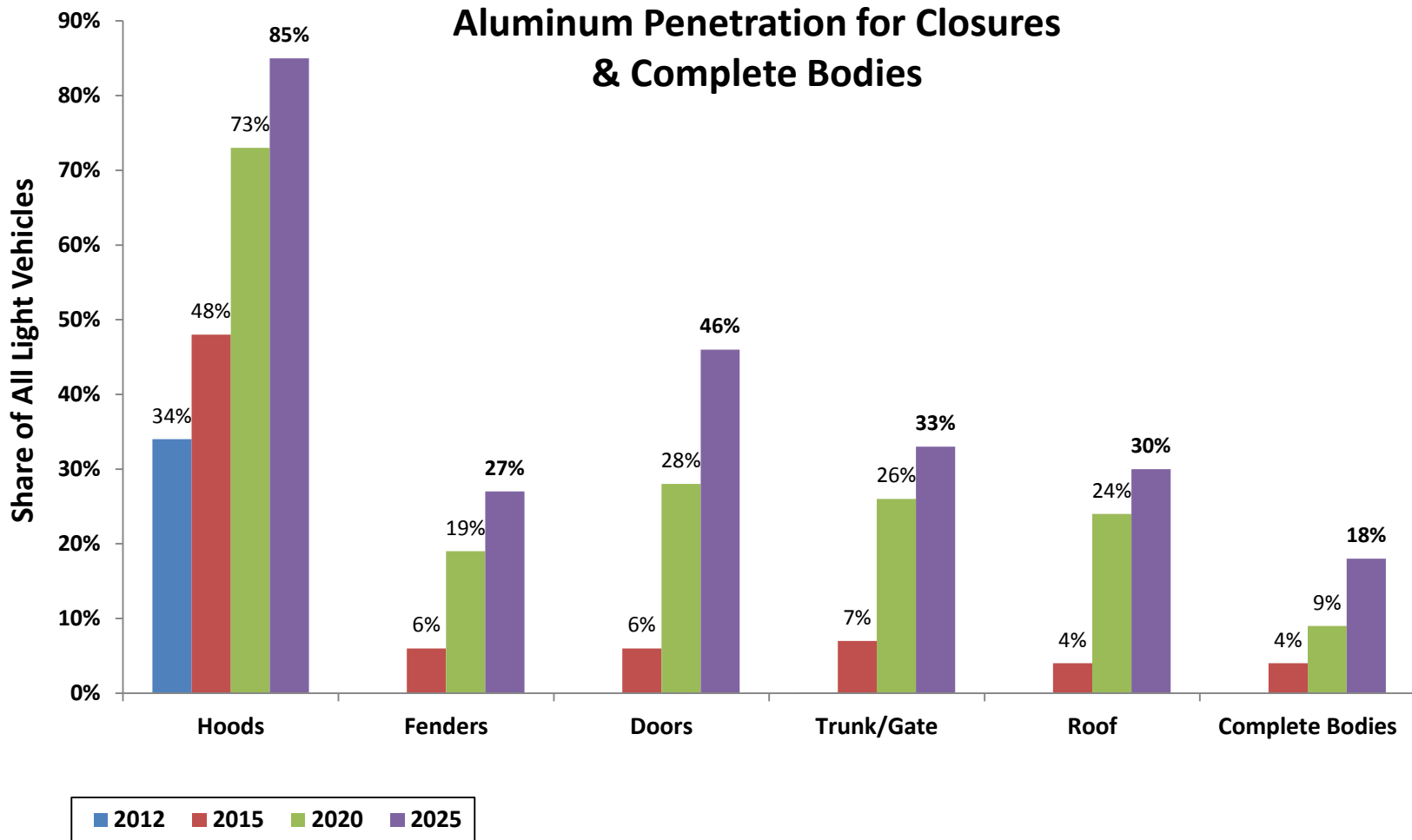
2025



41% Mill Products

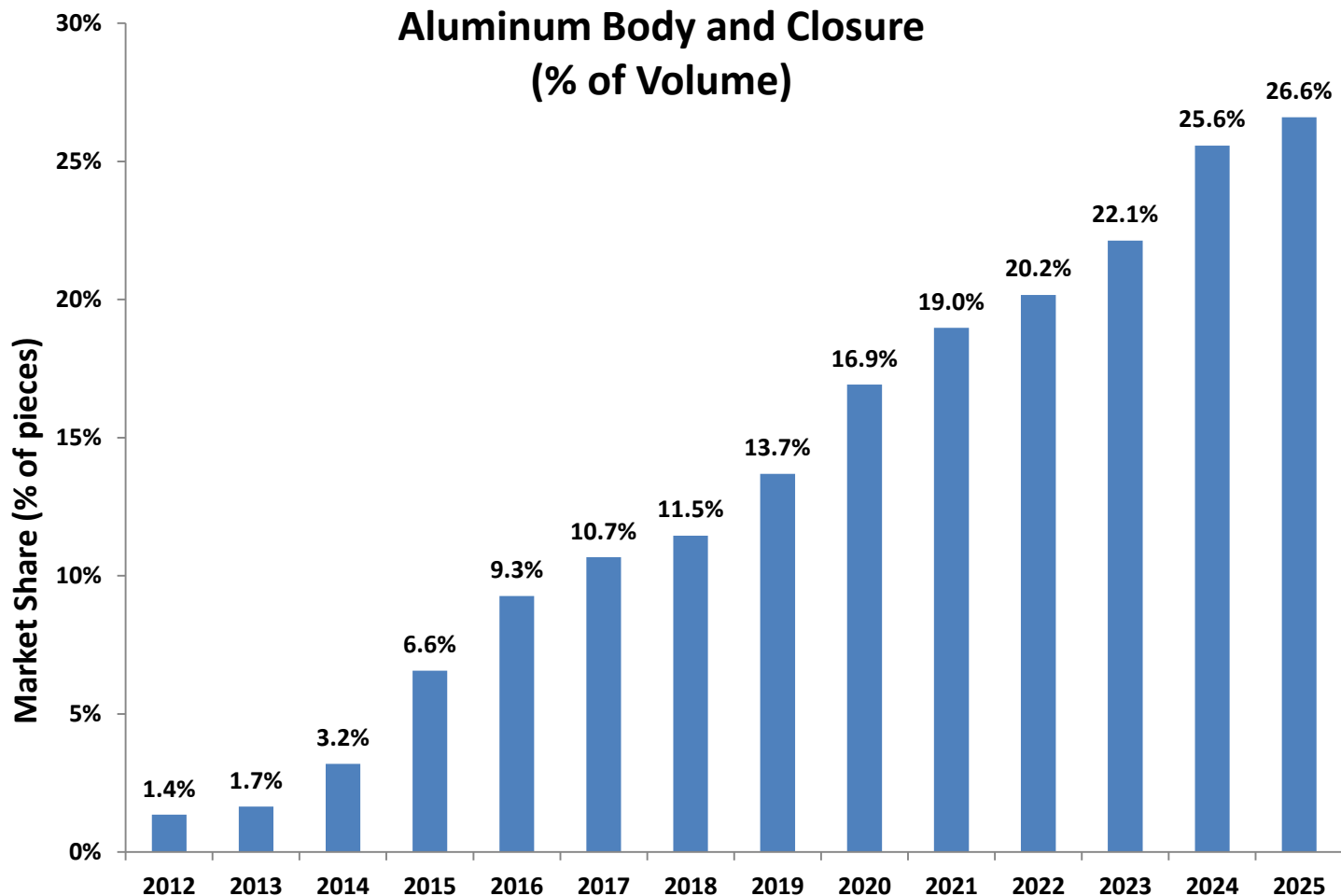
# 2012 - 2025

## Growth in Aluminum Body & Closures



# 2025

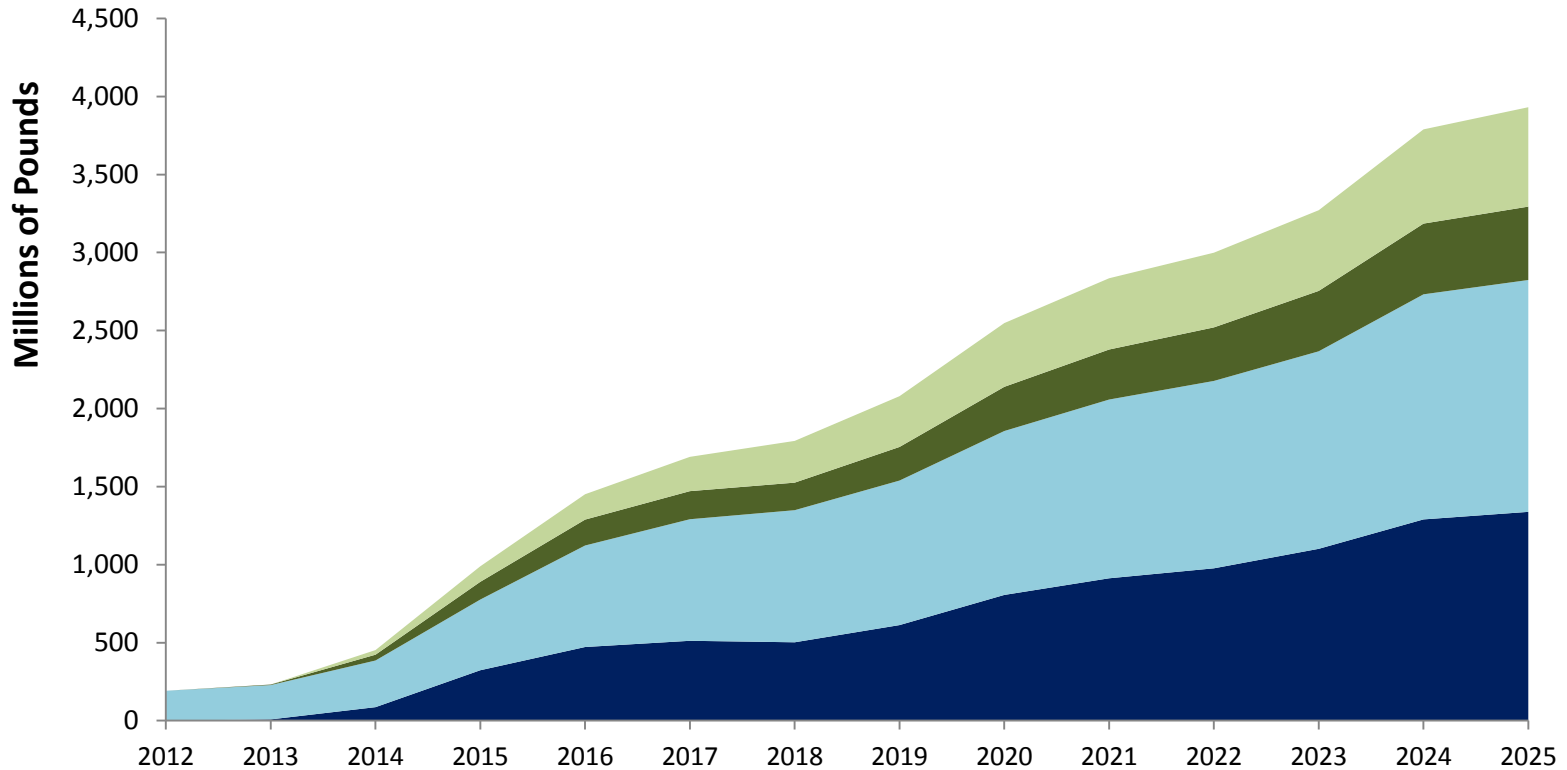
## 26% of Body & Closures Parts Aluminum



# Aluminum Sheet Shipments Approach 4B Pounds

Sheet shipments: 70% 6xxx; 30% 5xxx alloys

North American Light Vehicle Gross Aluminum Sheet  
( MM pounds)

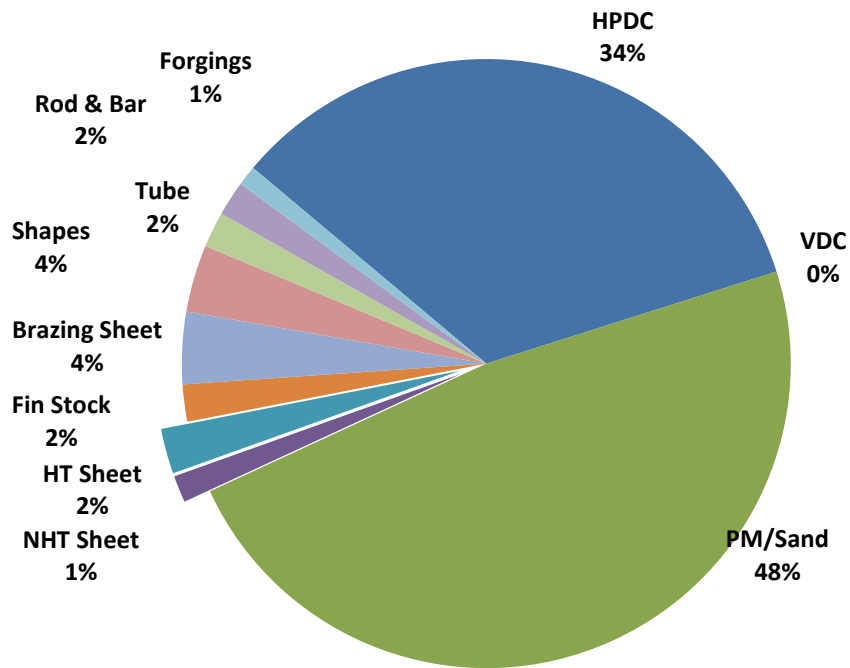




# 2012 – 2025 Aluminum Product Forms Transition

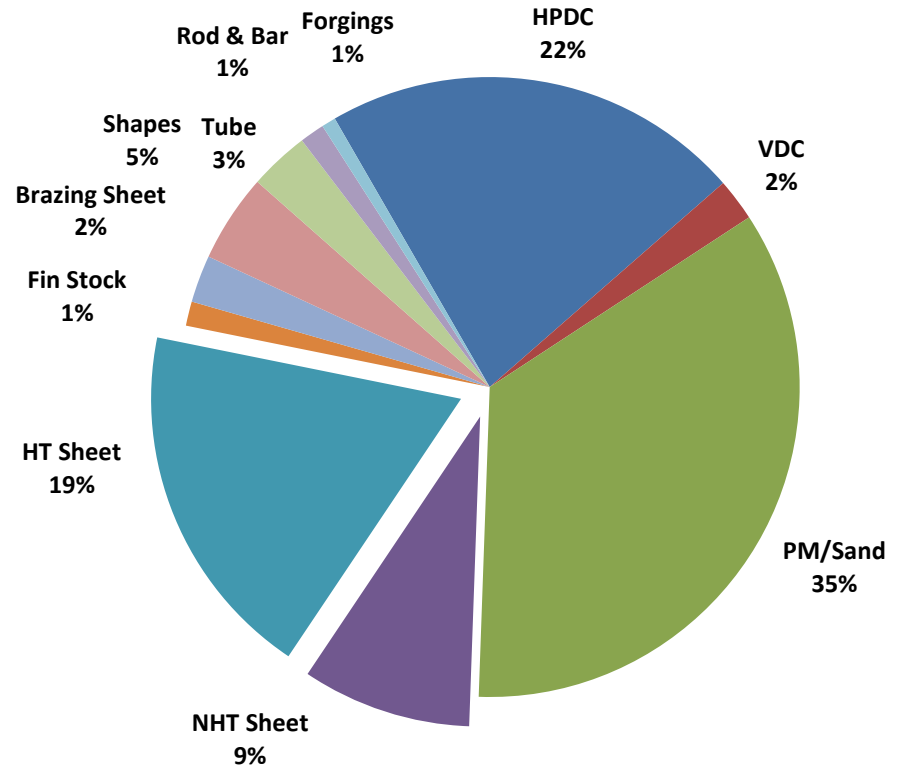
## Mill Products: 18% - 41%

**2012**



**18% Mill Products**

**2025**



**41% Mill Products**

# Summary – Automotive Aluminum 2025

- ✓ Multi-material vehicle designs – the new norm  
Efficient utilization of all available materials
- ✓ Automakers - Increasing Aluminum Use  
16% by 2025 (10% 2015)  
+ 14 Lb./Yr. – Next 10 years (+ 7 Lb./Yr. – Past 40 years)
- ✓ Emerging Applications – Closures and Body  
Closures - 26% by 2025  
Body - 18% by 2025  
Sheet and Extrusions average: + 128 Lbs./Veh. average



**Thank you!**

**Q & A | Please submit  
questions through the box  
that appears on your screen**

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