



3M Science.
Applied to Life.™

3M Automotive Aftermarket Division
Together, creating the
future of care and repair

Victorian Automotive Forum

*Ryan Williamson –
Segment Sales Manager AOEM/MSO*

- 3M
- 3M Automotive Aftermarket Division
- Impact Resistant Structural Adhesive (IRSA) Applications
- Cubitron II Abrasive Applications



3M at a glance



- Sales in ~200 countries
- Five business groups
- \$32.8 billion in sales
- 93,000 3Mers globally
- 115,000 patents
- 60,000 + Products
- 100+ straight years of dividends
- Annual R&D Investment of 1.0B

Our five Business Groups

2018 Results



\$32.8B Revenue



Health Care

\$6.0B



Safety & Graphics

\$6.8B



Industrial

\$12.3B



Electronics & Energy

\$5.5B



Consumer

\$4.8B

Health Care



From preventing infections and protecting wounds, to improving oral health and ensuring food quality



Safety & Graphics



From protecting people and improving road safety and mobility to enhancing visual and design communication



Industrial



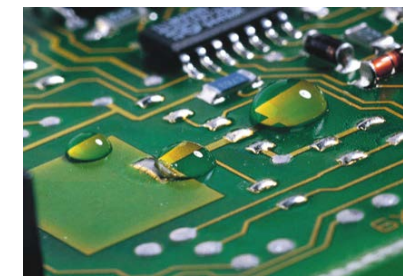
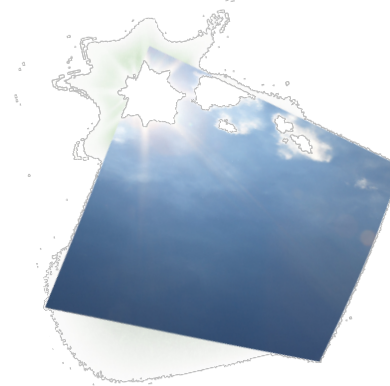
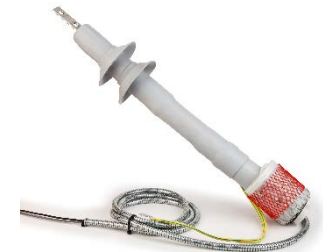
From purification to aerospace through to manufacture and repair, we change how industry works



Electronics & Energy



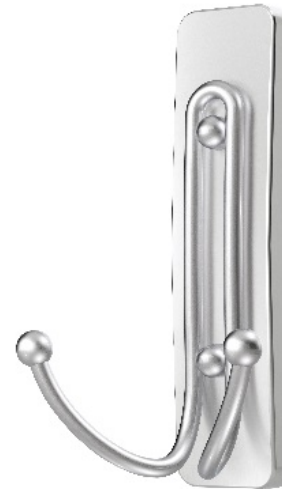
Advancing a connected world



Consumer



Making life easier and more productive at home and work



Global capabilities

Sales in 200 countries

Sales & Marketing Operations in 69 countries



Laboratory & Application Engineering in 50 countries

Manufacturing & Converting in 35 countries

- Key
- Sales & Marketing
 - ◆ Manufacturing & Converting
 - Technical Capabilities

Our vision

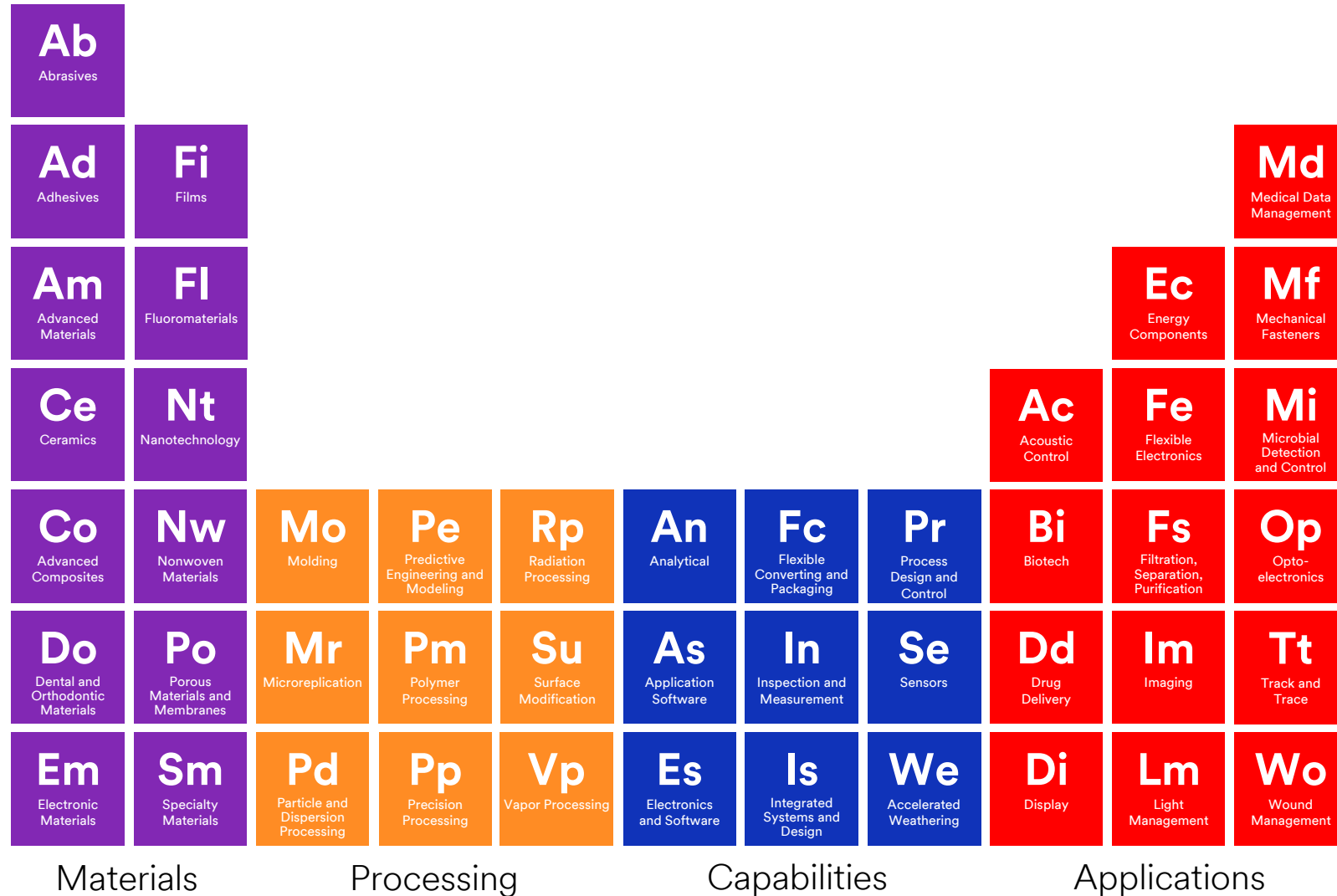


Our Vision

3M Technology Advancing Every Company
3M Products Enhancing Every Home
3M Innovation Improving Every Life



Technology



We apply individual technologies across our businesses...



Electronics & Energy

Securing films and other parts of electronic devices



Industrial

Helping hold planes and cars together



Health Care

Medical tapes and dressings



Safety & Graphics

Scotchlite™ reflective material and car wraps

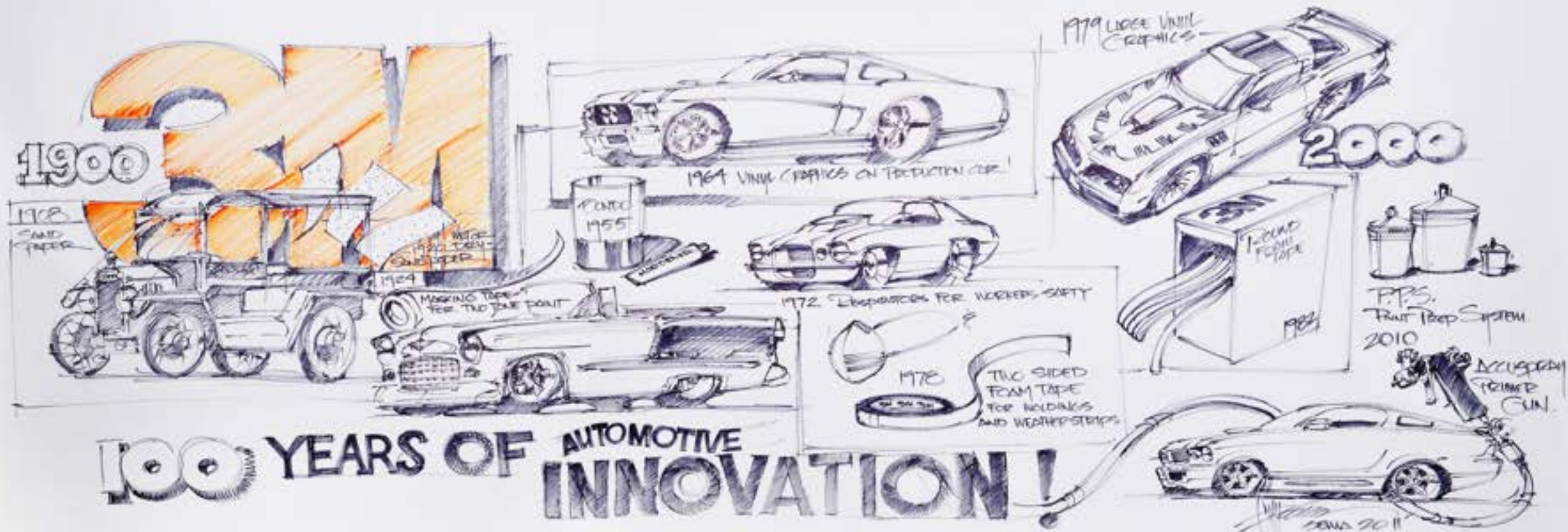


Consumer

Post-it® notes, Scotch® tapes, Command™ strips



Automotive Aftermarket Division



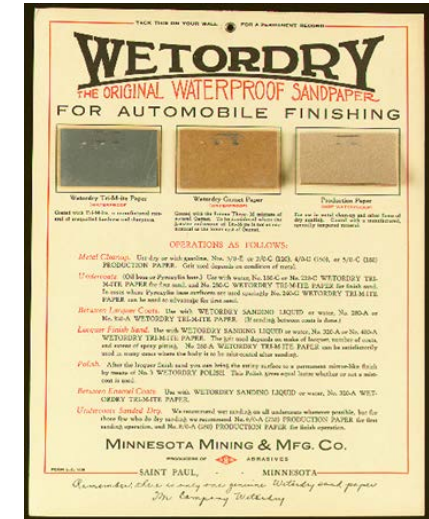
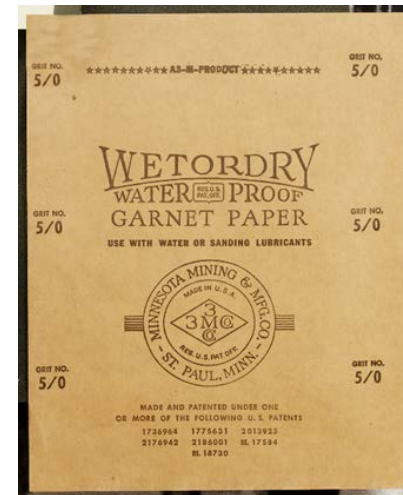
With more than 100 years of automotive industry experience, we know the nooks and crannies of auto design, manufacture and repair—from helping OEMs improve fuel economy with light weighting solutions, to helping auto body specialists revolutionize the painting process.

Leading Innovation in Automotive Aftermarket

3M Wetordry™ Abrasives and 3M™ Scotch® Masking Tape First Used on the Ford Model T as Automobile Production Grew at the Historic Ford Piquette Plant in Detroit



1921 – 3M Release the Wetordry Sandpaper for the Automotive Industry



3M automotive products keep the world on the move. From the collision repair professional to the individual vehicle enthusiast, people around the world trust 3M products to protect, repair and keep their vehicles looking showroom new. And our commitment to this industry extends beyond product performance to a careful stewardship of the world's resources and environment. Serving the needs of our customers has made 3M a trusted leader in vehicle care and repair, and we are dedicated to earning that trust each and every day.

Collision Repair Center

3M systems & solutions play a role in all aspects of the repair process



Abrasives



Fillers, Adhesives,
Coatings & Sealers



Masking



Paint Spray Equipment



Compounds, Polishes,
Glazes & Pads



Surface Protection



Tools & Accessories

Trends Impacting the Collision Industry



Labor Shortage

Difficult to attract and retain talent
Challenges in training and continuing education



Environmental Health & Safety

Dust free workspaces
Worker safety
Solvent reduction



Repair Complexity

Sensors
Calibration
Training Requirements



Repair & Service

Newer vehicles repaired in authorized shops
Consolidation of Repairs

Training and Support

TAFE School Training

I-Car programs

World Skills

Industry Nights

Technical Representatives



3M ANZ Training Centre



End-User Customers
Distribution Customer
Internal Training
Industry Events



3M ANZ Automotive Aftermarket Team

Andrew King – ANZ Business Manager

Kasey Douglas – ANZ Marketing Manger

Kim O Neil – ANZ Product Manager

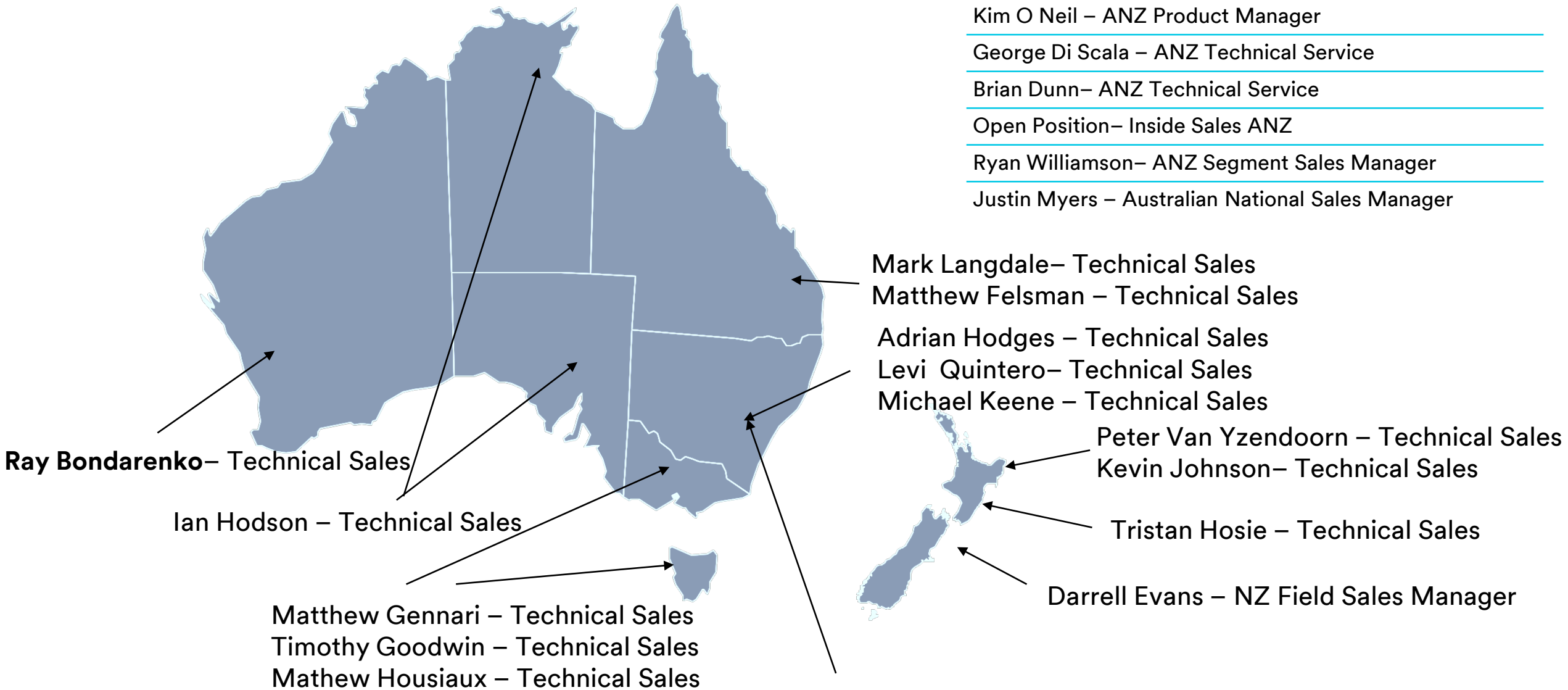
George Di Scala – ANZ Technical Service

Brian Dunn – ANZ Technical Service

Open Position – Inside Sales ANZ

Ryan Williamson – ANZ Segment Sales Manager

Justin Myers – Australian National Sales Manager



ANZ Training Centre

3M Global AOEM Collision Repair Engagement

We design and develop repair solutions for the next generation of vehicles, by working in partnership with OEM engineers, starting in the vehicle idea stage and carrying through design and production, to provide the industry with the most productive and safest repairs possible.

Innovation
Product Development
Repair Processes
Technical Training
Collaboration

Impact Resistant Structural Adhesives (IRSA)

OEM's are Using MULTIPLE Joining Methods in Manufacture



Resistance Spot Welding



Gas Metal Arc Brazing



Resistance Projection Welds



Laser Brazing

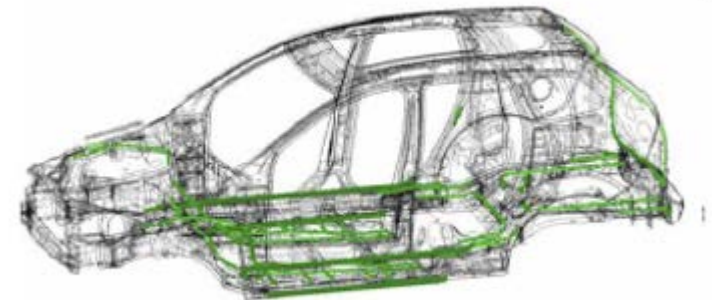


Self-Piercing Rivets



Adhesive Bonding

Joint method	New	Old	+/-
Spot welds [#]	4337	4799	-462
Laser welding [m]	10	3.6	+6.4
Arc weld [m]	4.8	5.9	-1.1
Structural adhesive [m]	44	8.3	+35.7



Why?

Lighter, stronger, safer more fuel efficient vehicles.

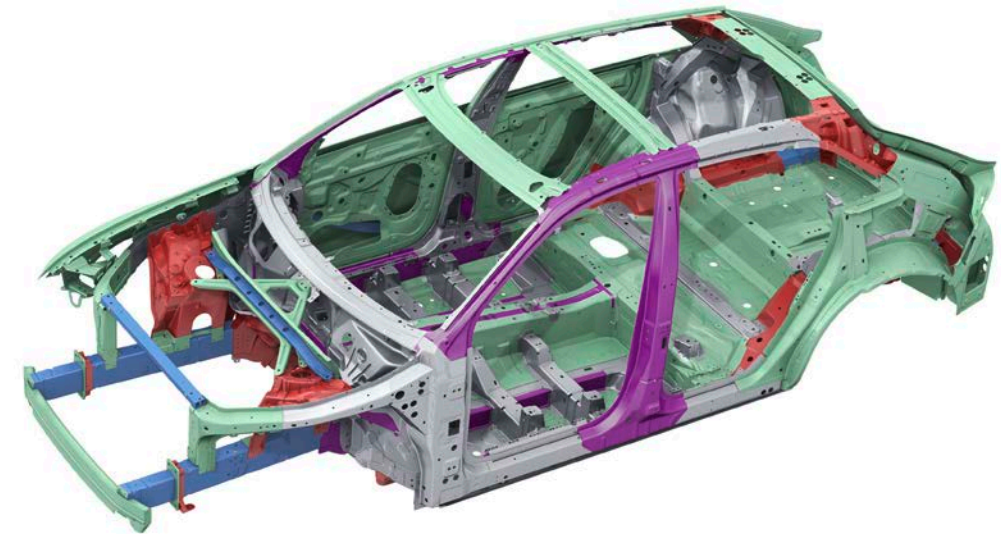
Constructed of lighter and/or thinner materials– UHSS, Aluminum, Plastic, FRP, Magnesium

Additional Crumple Zones

Higher Strength or Stiffer Materials Shift more stress to the Joints

Joining Dissimilar Products Required.

Hybrid joint techniques are required.

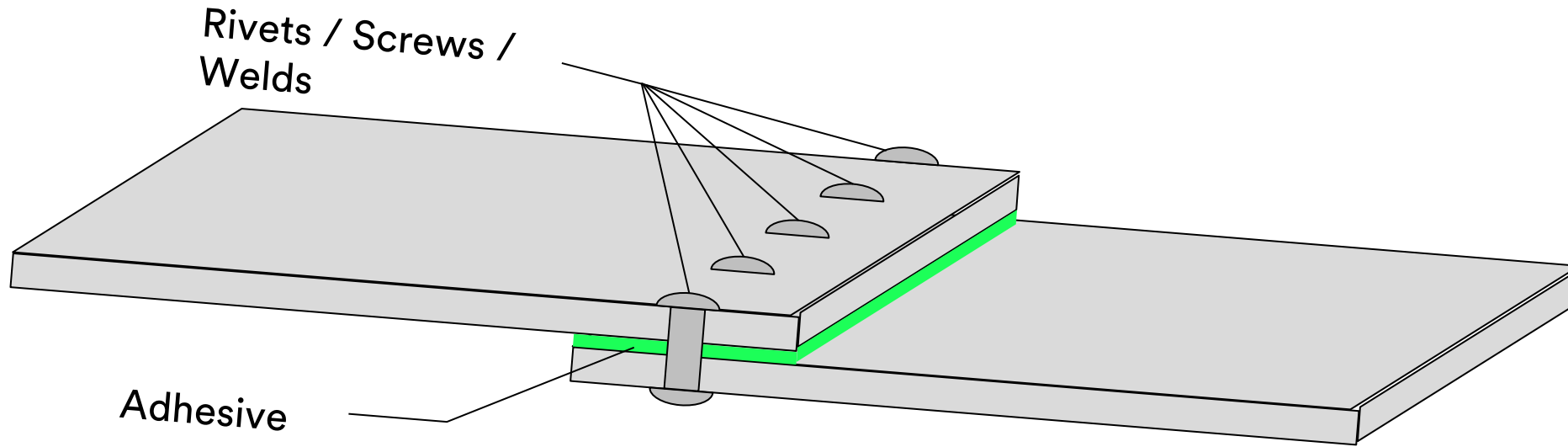


 Stahl kaltumgeformt Cold-formed steel	 Aluminium-Guss Aluminum castings	 Aluminium-Blech Aluminum sheet
 Stahl warmumgeformt Hot-formed steel	 Aluminium-Profil Aluminum sections	

Introducing “Hybrid-Joining”

A Generic Term for both “Weld-Bonding” and “Rivet-Bonding”

Hybrid Joining is the process of using an adhesive or sealer in conjunction with spot attachments (such as rivets, screws or spot welds) to create a stronger, more efficient structural connection.



Hybrid Joints

Pros

- Built-In Fixturing
- Shear Strength + Peel Protection
- Increased Stiffness
- Increased Durability
- Join Dissimilar Material

Cons

- Added Repair Complexity

What is 3M IRSA -07333

- 2-Part Epoxy Adhesive with excellent adhesion to a wide variety of properly prepared Automotive Substrates, including steel and aluminum.
- Designed to meet many OEM specifications for Collision Repair Procedures
- Intended for use in true structural bonding applications where specified by OEM



Manufacturers Recommending 3M (IRSA)



Note:
May not be in all model ranges and will be subject to changes..

Cubitron II™ Abrasives

3M Automotive Aftermarket

CUBITRON II

Abrasives Range



1



Cuts 30% faster and lasts twice as long as conventional ceramic abrasives

2



Requires less pressure and helps reduce technician fatigue.

3



Runs cooler for improved quality

4



Delivers a finer, more uniform finish

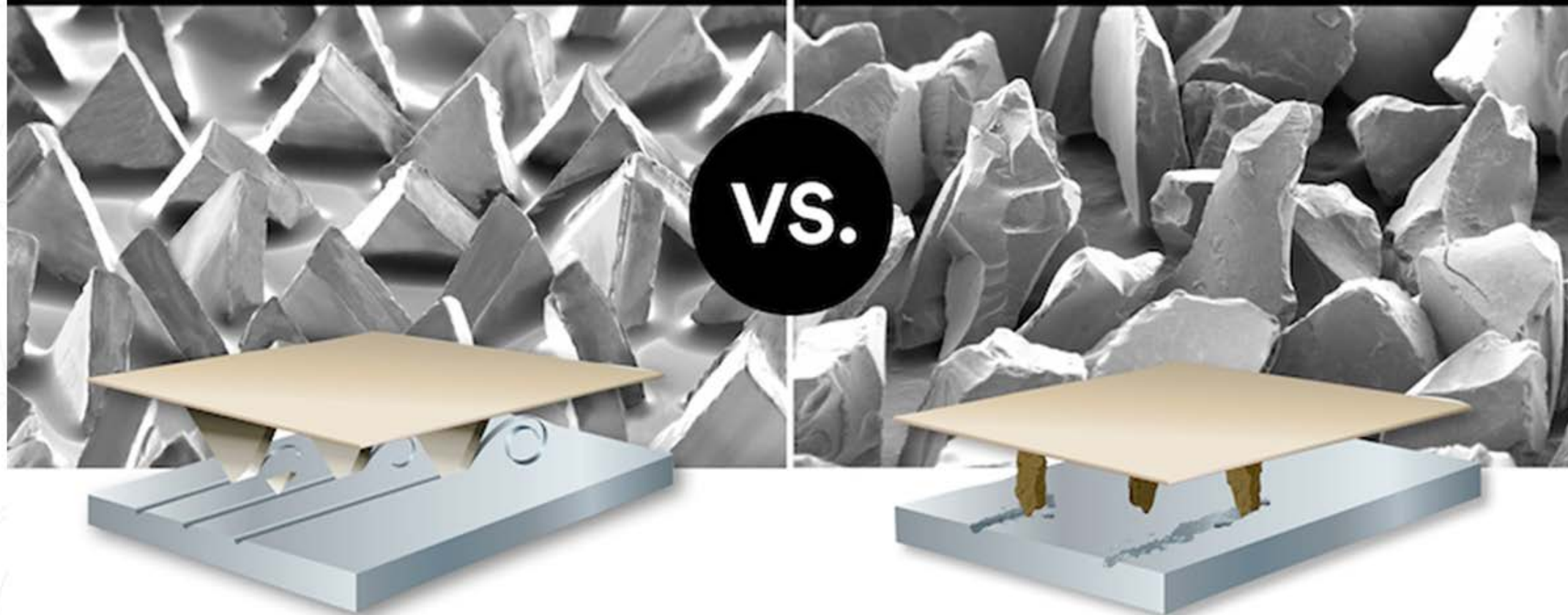
5



Saves time and improves productivity

3M Precision-Shaped Grain

Conventional Grain



3M Precision – Shaped Grain in the Cubitron II products continually fracture to form sharp points and edges – slicing cleaner, faster, staying cooler and lasting many times longer.

Conventional Ceramic Abrasive Grain is irregular in shape. Instead of clean, machining action, the grain “plows” through the metal, causing heat build up. Slower cutting and shorter life,

3M Cubitron II File Belt Key Benefits

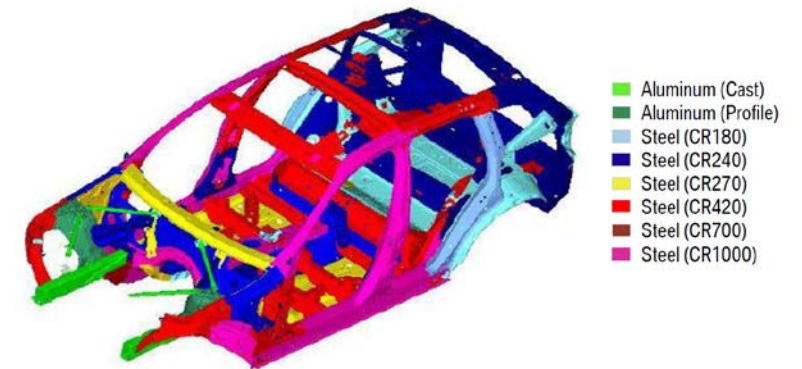
Key Applications :

- Spot Weld Removal – no drilling required
- Grinding Hard to reach areas



Key Benefits :

- Highly effective on High-Strength Steel
- Faster cutting speed, reduced effort and control of cut depth.
- Cooler cutting temperature's, reducing steel effect and “blueing”
- Multiple uses and fewer belt change-out.



3M – BMW & Volkswagen



New Volkswagen / 3M VAS & ASE

The Volkswagen Group technical department in Wolfsburg has now approved after several long-term tests on different applications the 3M File Belt Sander (13 x 457 mm) and three grits of CU II File Belts. Volkswagen has recognized the high performance and lifetime of our Cubitron II system to open spot-welds on ultra high strength steel. For example on the new VW Touareg it was not possible to open spot-welds with the classic spot-weld-drills. On the new VW T-Roc a lot of spot-welds cannot be accessed with spot-weld-drills. So CU II and the 3M File Belt Sander are the perfect problem solver.

The following 3M products are approved and got the VAS / ASE reference codes:

VAS 881 003A / ASE 88100381000 – 3M File Belt Sander (13 x 457 mm)

VAS 881 003/2A / ASE 88100481B00 - 3M Cubitron II File Belt 36+

VAS 881 003A/3 / ASE 88100480C00 - 3M Cubitron II File Belt 60+

VAS 881 003/1A - / ASE 88100481A00 - 3M Cubitron II File Belt 80+

The above new VAS / ASE numbers will be published in the different global VW Group systems (for example in ETKA or erWin) mid of January 2019.

This is now the perfect door-opener for you and your sales and tech-teams to approach Volkswagen Group body- and paint shops, as well as the national VW subsidiaries / importers (the list and contact persons has been send out with the information concerning the new VW global contract in May 2018).

Provided by AAD key accounts team EMEA (Uwe Arold / Sebastian Dressen)

VOLKSWAGEN
ARTIKELGESAMTHEIT



BMW recommends:
3M products for body repair

3M™ File Belt Sander & File Belts

Thanks to its flexible adjustment options and the slim tool tip, the 3M File Belt Sander enables precise grinding and material removal.

- Ideal for removal, deburring, cleaning, and finishing jobs
- Compact, robust, and efficient
- Comfortable adjustment of the speed (on the side or on the grip)
- Perfect Grip housing

The file belts are equipped with precision-shaped 3M Cubitron II abrasive grains and a highly flexible backing made of tear-resistant polyester. This promises the highest removal performance and longest service lives. The fleece belts remove paint and grime precisely without damaging the substrate. This combination is the perfect solution for your bodywork.



	Description	Content
3M™ File Belt Sander Starter Kit		
81 43 2 455 27	File belt sander, 13 x 457 mm, 17,000 rpm, 0.65 hp incl. 10 grade 60+ and 10 grade 80+ 3M Cubitron II file belts incl. 5 Scotch-Brite surface conditioning belt, coarse	1 set
Scotch-Brite™ Surface Conditioning Belt DP-BL		
81 43 2 455 285	13 x 457 mm, coarse	25 pcs.
3M™ Cubitron™ II File Belts		
81 43 2 455 286	13 x 457 mm, 60+	20 pcs.
81 43 2 455 287	13 x 457 mm, 80+	20 pcs.

Thank you
