

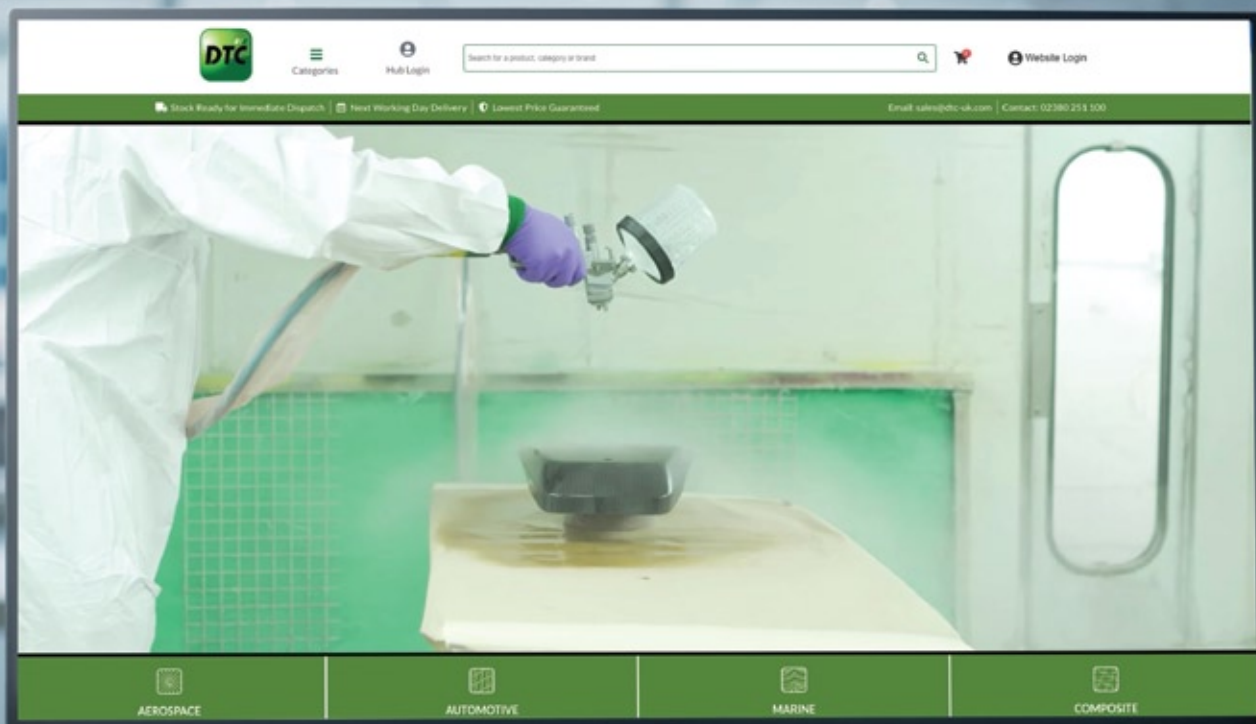
Q3 | 2023

Fusion

MAGAZINE

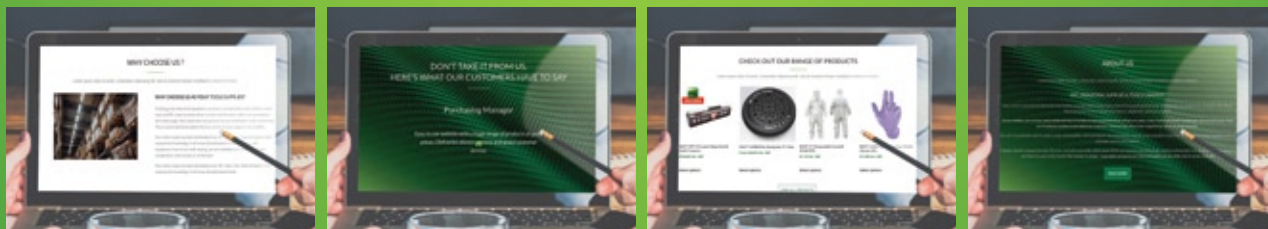


SUPPLY **MADE** SIMPLE



We're excited to introduce the fresh look of our website!

Welcome to the new and improved DTC website, where business meets style.



Our revamped design is all about making things easier for you. With improved navigation and a user-friendly layout, it's a breeze to find what you need.

Take a spin through our updated pages, uncover helpful resources, and stay in the know.

Join us on this journey of online awesomeness!

Scan to
watch our
company
video



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**Fusion
Magazine
Editors:**
*Harvey Taylor
& James Patch*



Your Partner in
Efficient Procurement

RAPID ORDERING FEATURE

In today's fast-paced business landscape, time is a precious resource. It's imperative to streamline operations and seize every opportunity to boost efficiency. Enter the DTC Hub's 'Rapid Ordering' feature, a simple yet powerful tool that lives up to its name.

Order It

Pick It



The Power of Pre-Populated Favourites

Imagine having a list of your most frequently ordered products always at your fingertips, ready to go at a moment's notice. With 'Rapid Ordering,' you can achieve just that. This feature allows you to create and maintain a pre-populated favourites list within the DTC Hub platform.

How It Works

GETTING STARTED IS A BREEZE:

Customise Your List: Begin by curating a list of your go-to items, whether they are fast-moving essentials or cherished favourites. The beauty of this feature lies in its flexibility – it adapts to your unique business needs.

Effortless Ordering: When it's time to replenish your supplies, there's no need to hunt through countless product listings. Simply access your pre-populated favourites list and specify the quantities you require. With a few clicks, your order is ready to go, saving you valuable time.

Scan
the QR
Code &
Watch
the
Video



UNLOCKING EFFICIENCY

So, why is 'Rapid Ordering' such a fantastic asset? Here are the key benefits:

Timesaving: By removing the hassle of sifting through product catalogues, you can place orders in record time. This means more time for strategic decision-making and less time on routine tasks.

Consistency: Ensure consistency in your procurement process by always having your preferred products readily available.

Boosted Productivity: Streamlined ordering translates to fewer disruptions, resulting in enhanced productivity for you and your team.

Reduced Errors: With your trusted products easily accessible, you'll minimise the risk of ordering errors, ensuring smooth operations.

GET STARTED TODAY

Don't miss out on the opportunity to supercharge your business operations. Log in to your DTC Hub account today and discover the incredible efficiency of the 'Rapid Ordering' feature.

At DTC, we are dedicated to providing you a service that elevates your business. We believe that this feature will be a game-changer in helping you achieve greater success.

Should you require any guidance or assistance, our support team is ready to assist you.

For any information about the DTC Hub, visit our website by scanning the QR code or using this link:

[Signup | DTC Hub \[dte-hub.com\]](https://dte-hub.com).

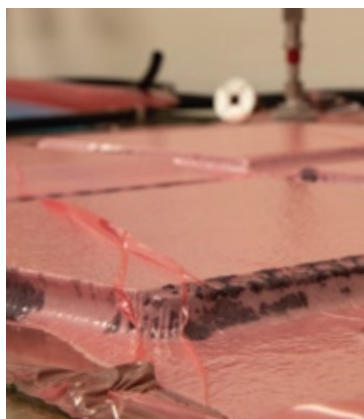
Make the most of your time and resources – embrace 'Rapid Ordering' and experience the difference it can make.

Send It

Get It



TRANSFORMING BOAT BUILDING: The Rise of Silicone Vacuum Bagging



Plastic vacuum bag style



Image used with permission of Smooth-On, Inc. All rights reserved.

In the coastal town of Bristol, Rhode Island, known for its rich shipbuilding heritage, a quiet revolution is underway in the world of boat construction. A visionary shift in traditional methods has emerged, driven by a commitment to both efficiency and environmental responsibility. Let's dive into the innovative journey of a boat manufacturer that has embraced silicone vacuum bagging, a game-changing technique.

A Plastics Predicament

In this picturesque coastal town, boat production had become synonymous with excess waste. For every boat crafted, a substantial amount of resources were discarded, leading to growing concerns. The boat manufacturer, looking to cut costs and reduce their environmental footprint, found themselves at a crossroads. Disposable materials like plastic vacuum bags, tape, flow media, and peel ply were a significant part of the problem.

The need for a sustainable alternative became apparent, leading the manufacturer to seek a new approach to boat infusion, a process known for its complexity and high-stakes nature.

The Silicone Solution

The turning point came with the introduction of reusable silicone vacuum bags. This transition may

seem straightforward, but in the intricate world of boat infusion, it was revolutionary. Silicone bags brought durability, reusability, and a significant reduction in waste. They eliminated the need for disposable materials and streamlined the production process. Silicone bags, ingeniously held in place with customised mechanisms, created an airtight seal, replacing the need for disposable tapes and reducing the chances of leaks. These bags had been rigorously tested to ensure their reliability.

The Art of Infusion

Infusion in boat manufacturing is a precise and complex process. It's akin to a carefully choreographed performance where every move matters. The slightest deviation can lead to failure. The transition to silicone bags meant a departure from traditional disposable materials,

which were prone to issues like leakage and uneven resin distribution. In the new system, collapsible silicone runners replaced disposable spiral tubes, saving resin and minimising the need for post-cure grinding. This innovative approach to infusion showcased a commitment to both efficiency and environmental responsibility.

The Journey to Sustainability

The transition to silicone bags wasn't without its challenges. The manufacturer had to address issues like silicone bag expansion due to contact with certain materials. Overcoming these hurdles required investment, both in terms of time and resources. Yet, the company remained steadfast in its commitment to a more sustainable and efficient future.

AVAILABLE
SOON!

BAXT

CRYSTALCUT™



Introducing the

BAXT Crystal Cut Disc, a versatile solution for all finishing applications such as blending, paint preparation, and paint defect removal. Featuring aluminum oxide mineral cutting surfaces ranging from P600 to P2000, all backed by a durable film material.

For high quality sanding tasks requiring precision and superior finishing, consider the BAXT Crystal Cut Disc. Our discs combine the durability of film backing with the fast-cutting, long-lasting properties of aluminum oxide mineral abrasive. Aluminum oxide is a preferred choice among professionals for its exceptional cut-rate and extended lifespan. This mineral maintains its toughness, self-fracturing to reveal fresh cutting edges, unlike traditional natural abrasives that tend to lose their sharpness quickly.



ADVANCING AEROSPACE INNOVATION:

Materials & Structures Shaping the Future of Flight

In this article, we will be investigating the cutting-edge materials and ingenious structures that drive the future of flight. From lightweight composites to high-temperature alloys, join us as we unveil the secrets behind the remarkable advancements shaping the aerospace landscape.

The Aerospace Industry: A Historical Perspective

The aerospace industry has a rich history deeply intertwined with the evolution of materials and structures. At its inception, traditional materials like aluminium and steel played pivotal roles in aviation history. Aluminium's lightweight nature and corrosion resistance revolutionised aircraft design, while steel provided the necessary strength for larger aircraft and critical components.

A Leap Forward with Advanced Materials

Our focus quickly shifts to advanced materials that have taken aerospace engineering to new heights. Carbon fibre composites, titanium alloys, and ceramics have propelled the industry forward. Carbon fibre composites, made by embedding carbon fibres in a polymer matrix, offer exceptional

strength and lightweight properties, enhancing fuel efficiency and performance. Titanium alloys, renowned for high strength and corrosion resistance, are essential in critical components like engines and airframes. Ceramics excel in high-temperature and harsh conditions, vital for aerospace applications requiring extreme heat resistance.

The Revolution of Composite Materials

Composite materials have been revolutionary in aerospace innovation. Carbon fibre-reinforced polymers (CFRPs) and other composites offer exceptional strength, stiffness, and corrosion resistance. By incorporating composites into aerospace vehicles, weight reduction is achieved, resulting in improved fuel efficiency, increased payload capacity, and enhanced overall performance. Composites are employed in various components, including wings, fuselage structures, and interior panels, significantly impacting efficiency and durability.

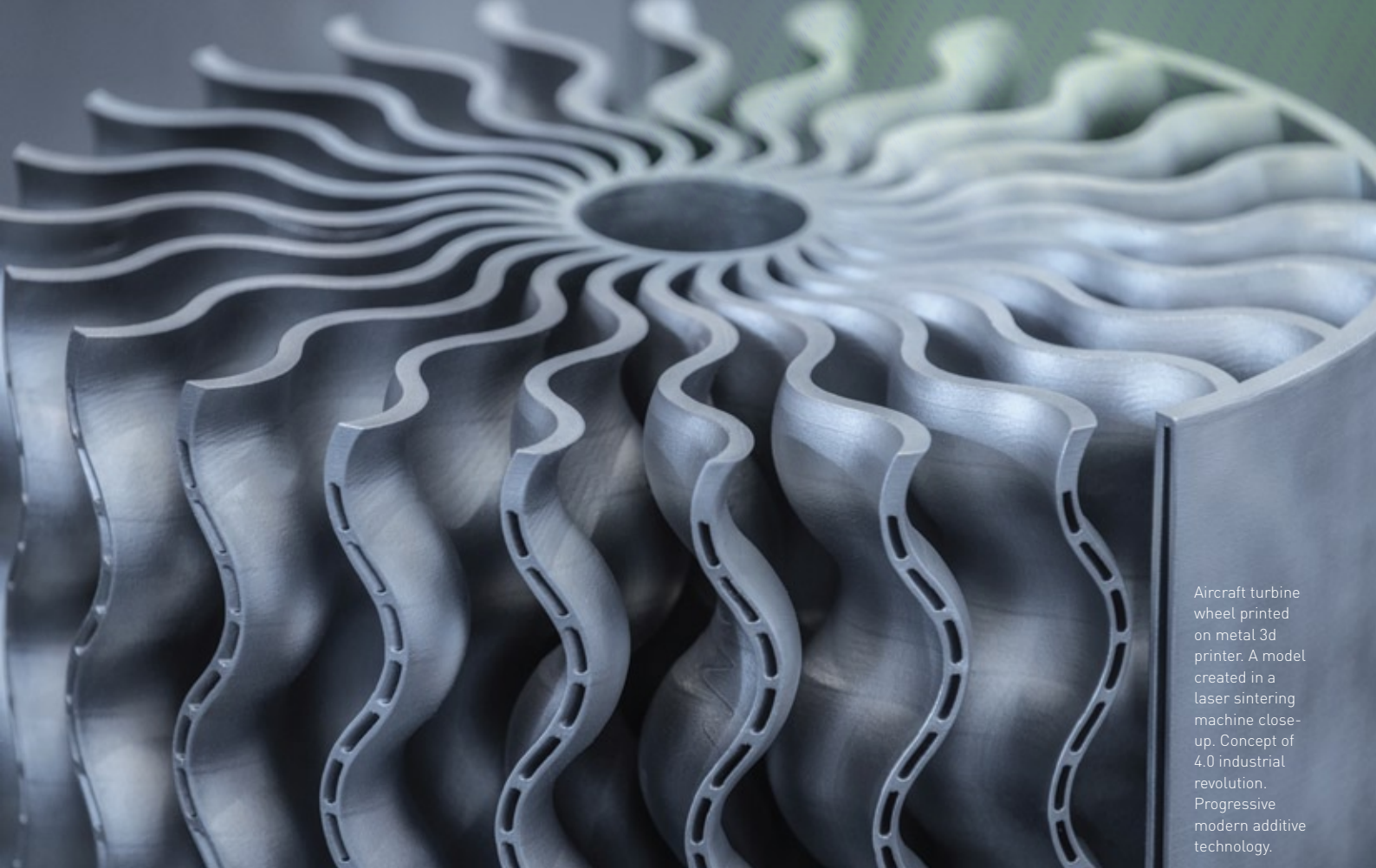
The Quest for Lightweighting

Aerospace design places a premium on lightweighting for greater fuel efficiency, extended range, and

reduced environmental impact. Engineers employ innovative design techniques and advanced lightweight alloys, such as aluminium-lithium and magnesium alloys, to reduce weight while maintaining structural integrity. Advanced manufacturing techniques like additive manufacturing (3d printing) allow the creation of intricate and lightweight components, optimising aircraft weight.

Materials for Extreme Environments

Aerospace vehicles often encounter extreme environments, necessitating materials that can withstand high temperatures and harsh conditions. Refractory metals like tungsten and molybdenum, with high melting points and excellent mechanical properties, are used in critical components exposed to extreme heat. Superalloys, developed with a combination of base metals and alloying elements, excel in strength, heat resistance, and corrosion resistance, making them ideal for turbine engines and high-temperature components. Ceramic composites, including silicon carbide and carbon-carbon composites,



Aircraft turbine wheel printed on metal 3d printer. A model created in a laser sintering machine close-up. Concept of 4.0 industrial revolution. Progressive modern additive technology.

demonstrate exceptional thermal and chemical stability, enabling them to withstand extreme temperatures

Additive Manufacturing: A Game-Changer

Additive manufacturing, also known as 3D printing, has emerged as a game-changing technology in aerospace materials and structures. This transformative process allows engineers to create complex geometries and lightweight lattice structures that were previously challenging or impossible to manufacture using traditional methods. The flexibility of additive manufacturing streamlines production, reduces waste, and accelerates innovation. It also enables rapid prototyping, facilitating quick and efficient design iterations.

Safety and Structural Integrity

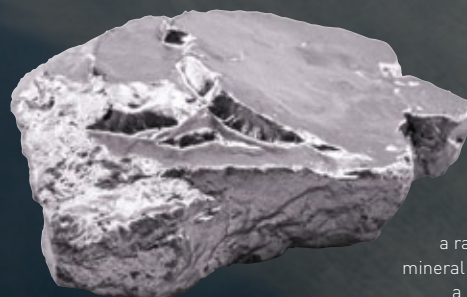
Ensuring the safety and structural integrity of aerospace vehicles are paramount. Rigorous testing, analysis, and certification processes are implemented to validate components' ability to withstand extreme loads and environmental conditions. Non-destructive testing techniques, such as ultrasound,

X-ray, and thermography, allow for the inspection of materials and structures without causing damage. Ongoing research focuses on developing self-healing materials that can autonomously repair minor damages, as well as smart structures integrated with sensors and actuators to monitor the health and performance of aerospace vehicles in real-time, enhancing safety and efficiency.

Conclusion: A Journey Towards Flight Excellence

In conclusion, the aerospace industry continues to push the boundaries of what is possible through innovative materials and ingenious structures. From traditional metals to advanced composites, from lightweighting strategies to additive manufacturing, each advancement propels us closer to a future where aircraft and spacecraft are lighter, stronger, and more sustainable than ever before. By harnessing the properties of materials such as carbon fibre composites, titanium alloys, and ceramics, aerospace engineers create vehicles that are fuel-efficient, high-performing, and capable of withstanding extreme environments.

As we explore the captivating world of aerospace materials and structures, we witness the relentless pursuit of flight excellence. The historical significance of traditional materials merges seamlessly with the transformative power of advanced materials, showcasing the industry's evolution. Through composite materials, lightweighting strategies, high-temperature materials, additive manufacturing, and a strong emphasis on safety, the aerospace industry propels us towards a future where the boundaries of flight are continually expanded. With each breakthrough, we inch closer to a world where the skies are filled with aircraft and spacecraft that embody the pinnacle of engineering innovation and inspire generations to dream of the possibilities that lie beyond our atmosphere.



Molybdenite, a rare earth sample mineral of molybdenum, a rare earth metal

THE ALL NEW **BAXT**

Discover the BAXT Polishing Range, a collection of high quality polishing solutions tailored to address all finishing needs. This range includes Solo 1000 and Solo Extreme for removing sanding marks and holograms, Premium Cut 3000, an abrasive liquid compound for paint refinishing, MicroCut 5000 for eliminating swirl marks and holograms, and M100, a versatile solution for gelcoat surface imperfections. Each product is designed to offer precise and efficient results, catering to the specific requirements of finishing professionals. Explore the range and find the right solution for your polishing needs.



BAXT Solo Extreme One Step Compound

Introducing BAXT Solo Extreme, a game changer in one-step compounds: Helps pads effortlessly glide across the surface, erasing even the most stubborn P1500 sanding marks at an astonishing pace, requiring minimal exertion. Watch these marks vanish, rendering P3000 abrasive discs obsolete, and conserving precious time and resources. The entire process unfolds with exceptional transparency, allowing operators to watch as imperfections disappear into oblivion.

- Exceptional permanence - no revisits required
- Effortless time and cost savings
- Elevated performance
- Remarkably crystal clear
- Erases holograms and swirl marks with precision
- Significantly reduces operator exposure to hand arm vibration (HAV)



BAXT Solo 1000 One Step Compound

BAXT Solo 1000 One Step compound, when used alone, effortlessly glides over the surface and effectively eliminates P1500 sanding marks, delivering rapid results with minimal effort. This eliminates the need for P3000 abrasive discs, resulting in significant time and cost savings. Throughout the process, the transparency of the product allows operators to watch these marks vanish for good.

- Lasting perfection – no need for touchups
- Crystal-clear results
- Time and money saver
- Seamless application
- Reduces operator's exposure to hand arm vibration (HAV)
- Effortlessly erases holograms and swirl marks

BAXT
...insist
on it

POLISHING RANGE



BAXT Premium Cut 3000 Compound

BAXT Premium Cut 3000 is a potent abrasive liquid compound designed for refinishing paints, serving to eliminate abrasive scratches in the paint rectification process. It also proven effective in removing oxidation, scratches, blemishes, and more, whether on original manufacturer's paint or other surfaces.

- Improved handling characteristics
- Potential for up to 30% reduction in usage
- Minimal effort required for cleanup
- Extended working time
- Achieves a favourable finish
- Transparency allows for scrutiny of remaining sanding scratches before proceeding
- Minimal sling during application
- Can be employed with or without the addition of water



BAXT Microcut 5000 Compound

BAXT MicroCut 5000 stands as a highly refined polish, specialised in eradicating swirl marks and holograms from both refinish and original paint. Its benefits include:

- Swift and efficient removal of fine machine polish swirls (commonly referred to as "holograms").
- Consistently delivers a swirl-free finish, even on the most challenging surfaces
- Designed for application after the machine polishing step



BAXT M100 Fast Cut Polishing Paste

BAXT M100 fast cut Polishing Paste efficiently removes sanding marks and significant imperfections from production and tooling gelcoat surfaces. Can serve as a one-step solution when working from P800 or P1000, ideal for quickly polishing white production gelcoats in areas where a mirror finish isn't necessary.



HOW ARE F1 LIVERIES CREATED?

Formula 1, the pinnacle of motorsport, dazzles fans not only with its high-speed races but also with the captivating liveries adorning the cars. These intricate designs are not just cosmetic; they are a blend of art and engineering, representing the heart and soul of the teams they adorn. Ever wondered how these stunning liveries come to life? Join us on a journey behind the scenes to uncover the fascinating process of designing and applying an F1 car's livery.

The Vision Takes Shape

It all begins with a vision, and that vision is entrusted to the Head of Creative. Their task is to strike a balance between slick, exciting, classy aesthetics while retaining the team's brand identity. The challenge is to create something fresh and unique without making it look like an entirely different car.

Months of Planning

Believe it or not, work on these designs starts months in advance, often while the team is still racing in the current season. The process

is anything but straightforward. It involves many considerations, including commercial, performance, and production factors.

Evolving the Design

To adapt the livery to the next season's car, designers start with the current car. They take the existing livery and transform it to fit the new car's shape. But it's not as simple as copying and pasting; the car's bodywork, aero packages, and chassis can all change, affecting the livery's design.

Partner Integration

Livery design isn't just about aesthetics; it also incorporates the logos of team partners. Designers work closely with the commercial team to integrate partner logos seamlessly, ensuring they fit within the livery's design. Every part of the car has value from a sponsorship perspective. In recent times, some teams in F1 have incorporated their sponsors into their designs. An example would be Williams who incorporated a Duracell battery into the roll hoop, creating an eye-

catching and conversation-sparking design feature.

So, how are they actually put on?

Now, you might be wondering whether F1 cars are painted or wrapped. The answer is painting. Each F1 car undergoes meticulous painting by highly specialised teams. Painting allows for precise aerodynamic optimisation and customisation that wrapping can't match, making it the preferred choice for F1 teams.

So, the next time you see an F1 car whizzing around the track, remember that behind its breathtaking livery lies an intricate process, a harmonious blend of creativity and engineering that sets the stage for the world's most thrilling races

Can you guess the Formula 1 track and the corner number?

Email in at Marketing@dtc-uk.com and we'll pick a winner to send a £20 Amazon voucher! **HURRY...competition ends November 1st**

What Grit Should I Use?



When it comes to sanding discs, one of the crucial factors to consider is the grit size. The grit size determines the coarseness or fineness of the abrasive particles on the sanding disc's surface. Choosing the appropriate grit size for your sanding project is essential to achieve the desired outcome. Here is a closer look at the significance of grit size and its applications:

1 Understanding Grit Size:

Grit size is represented by a number, which indicates the number of abrasive particles per square inch on the sanding disc. Lower grit numbers, such as 40 or 60, have larger abrasive particles, making them suitable for aggressive material removal. Higher grit numbers, like 220 or 320, have finer particles, offering a smoother finish.

2 Coarse Grits (40 to 80):

Coarse grit sanding discs are ideal for heavy-duty sanding and material removal tasks. They are commonly used to strip paint or varnish from wood surfaces, remove rust or corrosion from metal, or level uneven surfaces. Coarse grits work efficiently on rough or heavily damaged surfaces, but they may leave visible scratches that require additional sanding with finer grits.

3 Medium Grits (100 to 180):

Medium grit sanding discs strike a balance between material removal and surface refinement. They are versatile and commonly used for smoothing out rough wood, preparing surfaces for painting or staining, or removing light imperfections. Medium grits are often employed in woodworking, metalworking, and automotive applications.

4 Fine Grits (220 to 400):

Fine grit sanding discs are primarily used for achieving a smooth and polished finish. They are suitable for sanding between coats of paint or varnish, removing small blemishes or scratches, and preparing surfaces for final finishes. Fine grits are commonly used in woodworking, furniture refinishing, and intricate craft projects.

5 Extra Fine Grits (600 and above):

Extra-fine grit sanding discs are designed for delicate surfaces and final finishing. They are ideal for achieving a mirror-like finish on wood, polishing metals, or preparing surfaces for high-gloss finishes. Extra-fine grits are often used in fine woodworking, instrument making, and specialty applications.

6 Multiple Grits

Some sanding discs are available with multiple grits, allowing for progressive sanding. These discs feature different grit sizes arranged in concentric rings or segments, enabling users to transition seamlessly from coarse grits to finer grits as they work towards a refined finish.

Remember that the specific grit size you choose will depend on the material you're sanding, the level of imperfections you need to address, and the desired outcome. It's often a good practice to start with a coarser grit and gradually progress to finer grits for optimal results. Experimentation and practice will help you develop an understanding of which grit sizes work best for different sanding tasks.

Additionally, it's important to consider the speed and pressure applied during sanding, as they can affect the effectiveness and lifespan of the sanding disc. Adhering to manufacturer guidelines and using appropriate techniques will ensure that you achieve the desired results while maintaining the longevity of your sanding discs.

BAXT

FFP3 CUP MASK



- Traditional convex shape with nose clip
- Reliable and effective protection against fine particles with high performance filter material
- BAXT G4 Valve design provides cooler and more comfortable wear
- Comfortable and lightweight 4-point adjustable straps
- Durable, collapse resistant inner shell



FFP3 FOLD FLAT MASK



- Cooler and more comfortable use thanks to the BAXT premium valve and silicone washer.
- Lower breathing resistance with its durable body structure that is resistant to collapsing, hypo-allergenic inner surface and higher filtering capability.
- Rubber attachment that does not touch the skin.
- Adjustment buckle fits and is easy to use for all facial structures.
- Flexible, adjustable integrated nose clip ensures perfect fit even in the critical fields.
- Sealing and high safety with Memory Foam Nose pad.



100% ECO PACKAGING

RECYCLABLE & COMPATIBLE



The Role of Composites in Space Exploration:

LIGHTWEIGHT, DURABLE & BEYOND

Space exploration has always been at the forefront of technological innovation, pushing the boundaries of what is possible in the quest to understand our universe better. A key driver of success in this endeavor is the development and utilisation of advanced materials. Among these materials, composites have emerged as crucial assets in the design and construction of spacecraft, satellites, and space-based instruments. Composites offer a unique combination of strength, lightweight properties, and resistance to harsh environmental conditions, making them indispensable in the world of space exploration.

Lightweight Design

One of the most significant advantages of composites in space applications is their exceptional lightweight properties. Spacecraft are subjected to the extreme conditions of space, and every kilogram of payload comes at a premium cost in terms of launch expenses. Composites, such as carbon fiber-reinforced composites, have revolutionized the industry by significantly reducing the overall weight of spacecraft, ultimately lowering the cost of getting to space.

Structural Components

Composites are frequently employed in the construction of structural components within spacecraft. These components include satellite panels, booms, and support structures. By utilising composites,

engineers can achieve high strength-to-weight ratios, ensuring that spacecraft remain structurally sound while minimising mass, a critical consideration in space missions.

Thermal Stability

The space environment exposes spacecraft to extreme temperatures, ranging from scorching heat in direct sunlight to icy cold in the shadow of celestial bodies. Composites can be engineered to possess excellent thermal stability, helping to insulate spacecraft from rapid temperature fluctuations and protect sensitive instruments and equipment from thermal stress.

Radiation Resistance

Space is awash with harmful radiation, including solar radiation and cosmic rays, which can pose a significant threat to both equipment and astronauts. Composites can be tailored to provide effective radiation



shielding, safeguarding the integrity of vital systems and the health of astronauts on long-duration missions.

Vibration Damping

Vibrations are a common occurrence during launch, deployment, and operation of spacecraft. Composites can be designed to dampen these vibrations, ensuring the stability and functionality of sensitive instruments and components. This technology is particularly critical in maintaining the accuracy of scientific measurements in space.

Micrometeoroid Protection

The space environment is fraught with micrometeoroids, tiny particles that can cause damage to the outer surfaces of spacecraft. To mitigate this risk, composite materials are often employed as protective layers, reducing the likelihood of punctures and damage.

Deployable Structures

Deployable structures, such as solar panels, antennas, and booms, are essential for the operation

of spacecraft and satellites. Composites are frequently used in their construction because of their ability to be stowed compactly during launch and then deployed in space, providing necessary functions for the mission.

High Precision Instruments

In the realm of space-based scientific instruments, precision is paramount. Composites find use in the construction of high precision instruments due to their low thermal expansion properties and ability to maintain precise shapes. This ensures that scientific measurements are accurate and reliable.

Longevity

Composites are renowned for their durability and resistance to corrosion, qualities that are vital for the long-term operation of spacecraft and satellites in the unforgiving space environment. Their ability to withstand the test of time contributes to the success of long-duration missions.

Future Applications

As space exploration continues to advance, researchers and engineers are constantly seeking ways to enhance the performance of composites in space. This includes the development of advanced materials with even greater strength, radiation resistance, and other desirable properties. The evolution of composites is expected to be a driving force behind future breakthroughs in space technology.

Summary

Composites have become integral to space exploration, enabling the development of more efficient, durable, and cost-effective spacecraft, satellites, and space-based instruments. Their unique combination of properties, including lightweight design, structural strength, thermal stability, radiation resistance, and more, has revolutionised the industry. As humanity continues to push the boundaries of space exploration, composites will undoubtedly play a central role in the exciting missions and discoveries yet to come.

The Mirka logo is displayed in white, bold, sans-serif capital letters on a solid yellow rectangular background.

Mirka Long File Boards

For One or Two Operators

Speed up and clean up the sanding process in marine production. The special long file boards (Fairing Boards) are available in lengths to suit one or two operators, combining easy and fast hand sanding with dust extraction.

For further information or to arrange a demonstration, please contact Customer Services on 01908 866100.

Dedicated to the finish.



Find out more at www.mirka.co.uk



Going the Extra Mile at DTC

At DTC we're always striving to improve our commitment to delivering exceptional customer service.

Recently, we've introduced some exciting changes to our customer service team, and the results are nothing short of remarkable.

We are thrilled to announce two new staff members have joined our customer service team, and their arrival marks a significant step in our mission to deliver exceptional support to our valued clients. We spoke to one of the new members, "I couldn't be more excited to jump into the Customer Service team here at DTC," says Craig Bratley. "My aim is to bring a fresh energy and make every customer's experience truly outstanding. I'm ready to get going now and looking forward to progressing with DTC."

One noticeable improvement has been the reduction in our average call answering time to a lightning-fast 2.7 seconds on average. This significant reduction has made a tremendous impact on the efficiency and responsiveness of our team. Your time is valuable, and we're committed to ensuring that your inquiries are addressed promptly.

To enhance our customer service even further, we've implemented new systems that have streamlined and upgraded our team's capabilities. These systems have not only improved efficiency but have also allowed us to provide more comprehensive solutions, tailored to your specific needs.

We recognise that your business relies on seamless, dependable support, and we are committed to delivering just that. Our goal is not

only to meet your expectations but to consistently exceed them. Your success is our success, and we consider ourselves fortunate to be your trusted partner on this journey.

With our bolstered team, fresh energy from new arrivals, and our upgraded systems, we look forward to continuing to serve you with the utmost dedication, ensuring your experience with DTC is nothing short of exceptional.



Craig Bratley
Customer Service
Executive

NAVIGATING THE FUTURE:



The tranquil beauty of open waters has long been a source of fascination and escape for boating enthusiasts. However, in recent years, the boating industry has been undergoing a transformation fuelled by the integration of cutting edge technologies. From electric propulsion to smart boat features and sustainable materials, the future of boating is taking a high-tech turn.

The Green Wave: Electric Propulsion and Sustainable Power

One of the most significant changes making waves in the boating industry is the shift toward sustainable and eco-friendly propulsion systems. This shift is driven by environmental concerns and the desire to reduce the carbon footprint of boating.

Electric Outboard Motors:

For smaller boats and tenders, electric outboard motors have become a popular choice. They offer a multitude of benefits, including quiet operation, minimal emissions,

and low maintenance requirements. These motors are perfect for those looking to explore serene waters without disturbing the environment.

Hybrid Power Systems:

Larger vessels are now incorporating hybrid power systems. These systems combine electric and traditional propulsion to offer the best of both worlds: reduced fuel consumption and emissions, while still providing the range and power needed for extended journeys. Hybrid boats are quickly gaining popularity among eco-conscious boaters.

Charting New Courses: Advanced Navigation and Control Systems

Navigation is undergoing a revolution with the integration of advanced technology, making boating safer and more efficient. GPS and Chart plotting: Global Positioning System (GPS) technology has become an indispensable tool for modern boaters. Paired with chart plotting software, it allows for precise

navigation, real-time tracking, and improved safety on the water. No longer do boaters need to rely solely on paper charts and compasses.

Autonomous Navigation:

The concept of autonomous boats is on the horizon, promising to redefine marine transportation. These vessels use an array of sensors, artificial intelligence, and GPS to navigate waters safely and efficiently. While fully autonomous boats are not yet widespread, they represent an exciting glimpse into the future of boating.

Smarter Boats: Integration of Smart Features

Boats are getting "smarter" with the integration of technology-driven features that enhance convenience and comfort on board.

Remote Monitoring:

Smart boat systems are allowing owners to monitor their vessels remotely. Via mobile apps, boaters can check engine diagnostics,

Emerging Technologies in the Boating Industry



security, and even adjust climate control systems. This connectivity not only provides peace of mind but also streamlines boat maintenance

Internet of Things (IoT):

The Internet of Things has made its way to the high seas, enabling connected systems on board. This includes smart lighting, climate control, and even appliances that can be controlled remotely. Boaters can now enjoy the conveniences of modern living while out on the water.

Sustainability Above and Below the Surface: Materials and Design

Boat builders are increasingly embracing sustainable materials and design practices, ensuring that vessels are environmentally responsible from their construction to their operation. Eco-Friendly Hulls: Boat manufacturers are exploring sustainable materials like recycled composites and bio-based resins for boat construction. These materials reduce the environmental

impact of boat production, making a significant difference in the industry's overall footprint.

Hull Efficiency:

Innovative hull designs are optimizing fuel efficiency, reducing the carbon footprint of boating while providing better performance on the water. Boaters can enjoy longer journeys while knowing they are minimising their environmental impact.

Collision Avoidance Systems:

Radar and sonar-based systems are helping boats detect obstacles and potential collisions. This technology improves safety in crowded waters and low-visibility conditions.

Emergency Communication:

Satellite communication devices are ensuring that boaters can call for help even in remote locations. This added layer of security provides peace of mind for those embarking on long-distance journeys.

Conclusion: Navigating the High-Tech Horizon

The boating industry is on the brink of a technological revolution, and these emerging technologies are not only making boating more efficient and convenient but also more sustainable and safer. As we sail into the future, technology will continue to shape the way we experience the open waters, ensuring that boating remains an exciting and responsible pursuit for generations to come. Whether you are a seasoned boater or a newcomer to the world of maritime adventures, the integration of technology promises to enrich your experience on the water in ways previously unimaginable.

MASTERING PAINTING TECHNIQUES WITH A SPRAY GUN: Tips from the Pros



1 Preparation is Key:

Before picking up a spray gun, proper preparation is crucial. Clean the surface thoroughly, remove any debris, and ensure its smooth and free from imperfections. Professionals emphasise the importance of sanding and priming the surface to achieve optimal adhesion and an even finish.



2 Choose the Right Spray Gun & Nozzle:

Selecting the right spray gun and nozzle size for your automotive project is essential. HVLP (High Volume Low Pressure) spray guns are popular among professionals due to their ability to produce high-quality finishes with reduced overspray. Additionally, using the appropriate nozzle size for your

paint viscosity ensures efficient atomization and consistent coverage.

3 Adjust Air Pressure & Fluid Flow:

Proper adjustment of air pressure and fluid flow is critical for achieving a professional automotive finish. Professionals recommend starting with lower air pressure and gradually increasing it until the desired pattern and atomization are achieved. Similarly, fine-tune the fluid flow to ensure a steady and consistent stream of paint.

4 Mastering Technique:

Proper Distance and Overlapping: Maintaining the correct distance between the spray gun and the surface is crucial. Typically, 6-8 inches is recommended. Additionally, professionals emphasize the importance of overlapping each pass by about 50% to ensure even coverage and eliminate lines or streaks.

5 Practice Different Spraying Patterns:

Developing proficiency in various spraying patterns is an invaluable skill. Experiment with horizontal, vertical, and circular patterns to understand their effects on the final finish. Different patterns are

suitable for different areas of the vehicle, such as panels, curves, and corners.

6 Achieving a Wet Coat & Proper Flash Times:

Professionals aim for a “wet coat” application, ensuring the paint is applied evenly without running or sagging. Applying multiple thin coats with proper flash times in between allows the paint to settle and ensures a durable, smooth finish. Consult the product specifications for recommended flash times and apply each subsequent coat at the correct moment.

7 Finishing Touches: Clear Coat & Polishing:

To protect the basecoat and achieve a glossy finish, a clear coat is applied after the basecoat has dried. This protective layer adds depth and durability to the paint job. Once the clear coat has dried, professionals recommend polishing and buffing to remove any imperfections and enhance the shine.

Conclusion:

Mastering automotive painting techniques with a spray gun is a valuable skill for professionals and enthusiasts alike. By following the tips and techniques shared by automotive industry experts, you can achieve professional-grade results in your automotive painting projects.



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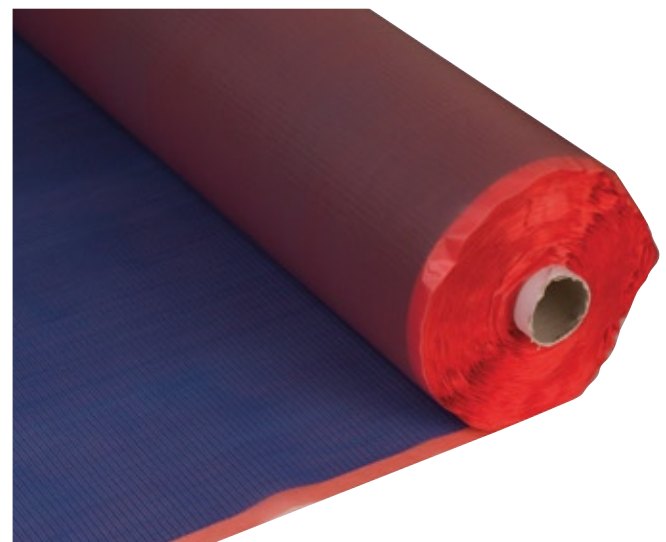
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