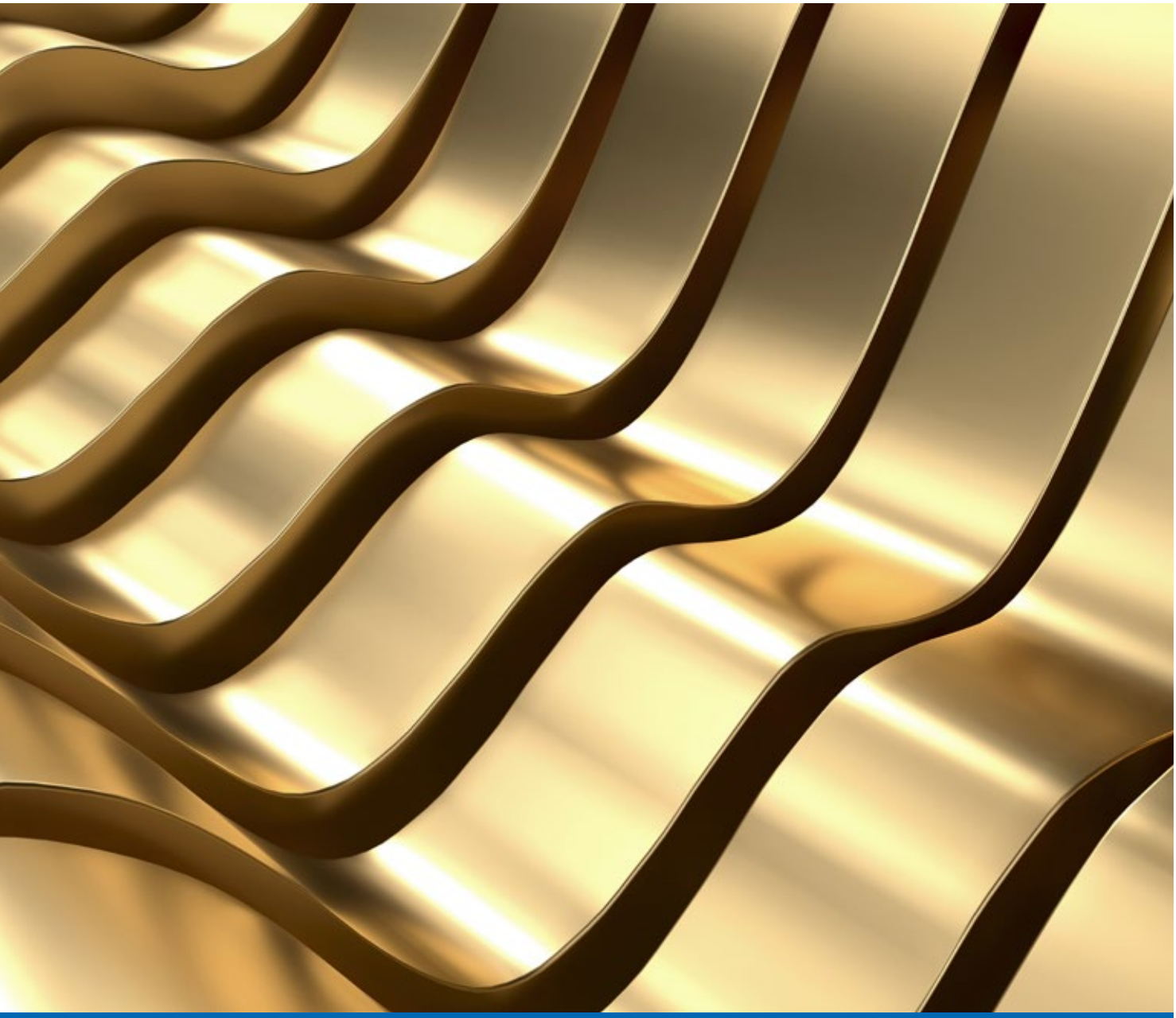

Polishing Precious Metal

Finish First with Osborn

Osborn offers the best solutions for your mechanical surface treatment challenges. Our experts are highly trained to serve you with the optimum off-the-shelf or customized tools, when and where you need them. Unlike others, we help you optimize your process, meet the highest quality and safety requirements and reduce your costs.

130 + years

of experience

Local Inventories

Osborn serves 120 countries around the world. North American, European, and Asian manufacturing assures product availability and prompt delivery.

High Performance

Finest quality cloths and construction techniques for buffing solutions. Superior buff treatments for repeatability and performance.

Unique and Reputable Capabilities

Honest experts providing trusted solutions.

Since 1887, we have grown to become the world's largest surface treatment and finishing provider. We're dedicated to offering the very best – a standard to which we hold ourselves and the aspiration we reserve for our diverse customer base. Osborn helps you Finish. First

Products for every application.

Osborn has the broadest selection of buffs and compounds in the industry. Osborn will develop custom solutions for particular applications when standard products cannot meet the demands

Continued innovation.

Product development focused upon customer applications. This applies to new products, continuous improvement, and process control.

Leading combination.

The combination of long lasting Osborn buffs and economical compounds provide excellent results and fewer rejects. Our liquid compounds are the most stable in the business due to unique methods of manufacturing. Our compounds are made using the highest quality minerals, sized within a very limited range, to ensure no unexpected lines or scratches on a given surface. They adhere perfectly to Osborn buffs for a clean and economical process. Let our experts show you how to achieve the lowest cost per part!

The Right Solution for Every Application and Every Workpiece

Precious Metals

Precious metals are made from naturally occurring metals. Due to the rarity of these metals, they are generally high in value. The most common precious metals include:

gold, silver, platinum, palladium and titanium.

Due to their natural lustre, these metals differ from other base metals and are therefore the material of choice for jewelry.

Finishing Precious Metals

Precious metals, by their very nature and cost, are used in the production of luxury items. The polishing process therefore brings a strong added value to these products.

Watchmaking, jewelry, luxury parts, high end electronic parts and medical implants all depend on the special characteristics of precious metals.

Polishing processes are especially selected to achieve a perfect gloss without any aggressive action that could remove too much material or damage the contours of parts that are often very small.

Finest Quality C

Mill-treated cloth manufa
Osborn specific

Consistency Eve

All cloths used by Osborn are
quality control procedures to
same quality every time (part
robotic operations run

Highest Quality

Tightest standards and controls for compound formulations providing consistency and repeatability.

Cloths

ctured to exact
ation.

Perfect Balance

Osborn buffs are concentric and perfectly balanced for smooth operation.

Designed for All Applications

Osborn perfectly attuned buffs and compounds for all manual and automatic operations.

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subject to stringent
ensure exactly the
ticular important for
nning 24/7).

Available in Multiple Sizes

Osborn buffs are available in metric and imperial sizes.

Trusted Solutions for Polishing Precious Metals

Luxury products are generally finished in a manual operation by experts. Osborn recommends the following solid compounds for this process. Since non-ferrous metals or stainless steel may form the basis of high-end products, suitable compound recommendations are included.

Solid Polishing Compounds

Osborn has a complete range of solid compounds for manual polishing.
These are available in special sized bags or bars, we will be glad to advise you.

		Precious Metals	Fat	Cut	Colour
UNIPOL 6310	grey	Cutting compound with gloss and no lines	5	9	3
UNIPOL 1128G	bordeaux	Versatile cutting compound	5	8	3
Export Lustre	brown	Famous Canning Tripoli compound for NF metals	5	7	3
UNIPOL 433	dark pink	Cut and colour compound	6	7	5
UNIPOL 17	green	All round colouring compound with some gloss	4	4	5
UNIPOL Gold	yellow	Original Gold compound for deep gloss	3	2	9
9505 Gold Fine	blue	Superfinishing: Stainless steel, platinum, titanium also non ferrous	3	2	9
OSBORN 1461	cream	Universal compound for the very highest gloss	3	3	10
9495 Gold Dry	yellow	Fine polishing and colouring of gold or non ferrous metal	1	2	10
9500 Gold Extra	rose	Superfinishing of gold, silver, stainless steel	2	2	10
9510 Gold Easy	cream	Fine polishing and colouring of stainless steel	2	2	10
AA Rouge	red	Driest gold polishing compound on the market	1	2	9

Scale from 1 = low to 10 = high

Did you know the world famous, former Canning brands: Export Lustre and AA Rouge, are also manufactured by Osborn?

Dialux® Polishing Compounds

Osborn is the manufacturer of the world class range of Dialux® compounds. These small, individually packed bars are the product of choice for goldsmiths and watchmakers across the globe.

Dialux®	Precious Metals	Fat	Cut	Colour
Vornex	Cutting compound for harder metals, stainless steel and platinum.	7	9	2
Yellow	Cutting compound for softer metals, plastics and resins	6	7	3
Black	Final finishing of silver	5	4	5
Grey	Good cutting compound, removes deeper scratches, refreshes stainless steel.	5	4	5
White	Perfect for sterling silver, good reflection properties	5	4	5
Blue	All-rounder for a range of metals, especially silver	5	4	5
Green	Colouring hard alloys like white gold, platinum and silver.	4	3	6
Red	Colouring compound mainly for gold.	3	2	7
Gold	Highest super-finishing compound for all materials.	2	2	9

Scale from 1 = low to 10 = high

Application

	Vornex	Yellow	Black	Grey	White	Blue	Green	Red	GOLD
Steel	X				X	X			X
Stainless steel	X			X	X	X			X
Gold					X	X	X	X	X
Non ferrous		X			X	X			X
Hard steel					X	X			X
Silver			X		X	X	X		X
Plastic		X			X	X			X
Platinum	X						X		X
Cutting	X	X		X					
Polishing					X				
Colouring			X		X	X	X	X	X

Scale from 1 = low to 10 = high

Sisal and Sisal Cloth Buffs

Sisal is a natural material, perfect for the first steps in the polishing process. Sisal buffs are aggressive and often follow a grinding step with coated abrasive or non-woven tools.

Pleated Sisal Cloth Buff

Regular folds with a sandwich of sisal web and cotton cloth, make the Osborn Pleated Sisal Cloth Buffs, an aggressive tool with good compound retention.

Used together with Unipol 433, these buffs are an excellent cutting tool for contoured parts.

Airflow Sisal Cloth Buff

A flexible and economical cutting tool with irregular folds of sandwiched sisal and cotton cloth. Buffs can be mounted together to form a wider surface when polishing larger surfaces, particularly on small rotary table machines.

A special soft treatment: A60 extends service life and results in a more uniform finish.

Airflow Mini Sisal Cloth Buff: a smaller 100mm version is also available.

Airflow Sisal Buff

A compact buff, purely made of sisal web. Lacking in flexibility, it is a hard and aggressive tool.

Together with Osborn cutting compounds, Sisal buffs may be used in the cutting process of stainless steel, brass or zamac, which form the base of buckles, clasps and even screws required for luxury products.

Airflow Sisal Cord Buff

The most flexible tools in the sisal range. Individual plaited cords wrap around contours, retaining sufficient cut in a cool process.

Airflow Sisal Cord Buffs are used primarily in the polishing of shaped parts.

Sisal Cloth Mop

Discs of treated or gray cloth are twisted and layered with sisal web to form an economical and low cost cutting tool.

Mops are the product of choice when there are limitations on diameter used.

Sisal Web

Sisal Cloth (Sandwich)

Sisal Cord

Sisal Types

Sisal is available as a woven fabric, sandwiched with cloth or plaited in to cord.

Type		Characteristics	Grade
Sisal Web	Type 82B	dense structure thin yarn	light/medium
Sisal Cloth	82B/301J	suitable for MOPS	medium/hard
	82B/101J	suitable for MOPS	medium
	82B/101B	suitable for Wave, Pleated and Airway Buffs	light/medium
Sisal Cord	Type 32	two cords twisted	light
	Type 48	eight cords braided	heavy

Cloth Buffs

All Osborn buffs are made with top quality biased cloth, ensuring their resilience and long service life.

Pleated Cloth Buff

The flat, regular pleats offer an excellent surface for retention of Osborn solid compounds. The hardness and flexibility of this buff depends on whether a mill-treated cloth, a standard cloth or a raised cloth is selected, this plus the choice of Osborn compound determines the polishing results.

Pleated Cloth Buffs are particularly suitable for manual polishing.

Airflow Cloth Buff

The standard ventilated buff, suitable for almost every step in the polishing process. Various qualities of mill-treated, gray or light cloth can be selected, depending on the results required. The irregular folds fixed to a metal clinch ring, form a flexible and economical buff. Buffs can be used individually or mounted on a shaft, depending on the equipment available. All grades of material can be matched to the Osborn polishing compounds.

Harder cloths for cutting with Unipol 1128G or lighter cloths for polishing with Unipol 17.

Airflow Mini Cloth Buffs in diameters of just 100mm are available, a perfect finishing tool small parts.

Cloth Mop

Discs of material are layered and stitched to a required width. Layers are arranged such that any fraying is minimal. By varying the grade of cloth and the stitching, different hardness's can be determined.

Cloth mops are used in manual finishing processes on small parts like buckles or clasps. The small Dialux® compounds complement this tool.

Loose Discs

Loose discs are available in all cloth types indicated below. They are supplied in all diameters required for standard equipment. Loose discs adjust to different shapes and contours. Each single layer is flexible and able to fit into the narrowest of parts.

Loose discs can be mounted together to form whatever width is required. They are also suitable for tapered shafts.

Cloth Types

Allow our experts to advise you on the most suitable cloth types for your specific polishing process.

Type	Reference	Characteristics	Application
Treated Cloth	264J	Medium heavy yellow treated cloth	Polishing
	BSKY	Treated blue cloth flexible dry for stainless	Polishing
	TT	Treated orange cloth hard dry for brass	Polishing
	P153	Treated purple cloth medium dry stainless	Polishing
	3260	Medium heavy colourless treated cloth, slightly elastic	Finishing
	6570	Light colourless treated cloth, slightly elastic	Polishing
Grey Cloth	304E	Medium, densely woven cloth	Polishing
	264E	Medium, densely woven cloth	Polishing
	202	Medium light cloth, long service life	Polishing
	6400	Very light cloth	Polishing
	5300	Very light, densely woven cloth	Polishing
Bleached Cloth	6420	Light white cloth	Finishing
	5310	Light white cloth	Finishing
Raised Cloth	M310	White cloth raised on both sides (very soft)	Super-finishing

Abrasive Non wovens

Abrasive non wovens consist of tangled nylon and/or polyester web with different types of abrasive grit particles resin bonded to the fibres. The material has an open and flexible structure, as it wears new abrasive is exposed to create a uniform and consistent finish, whether on a flat or slightly profiled surface. Abrasive grit particles are usually Silicon Carbide or Aluminium Oxide. The material can be used in both wet and dry operations.

LIPPROX® Wheel

Non woven abrasive web is wound around a core and specially treated, resulting in a consistent hardness and level of abrasion over the life of the product. This convolute wheel is perfect for light deburring. An arrow indicates the direction in which the Lipprox® Wheels must be used.

LIPPRITE® Wheel

Non woven abrasive flaps are bonded radially to a phenolic tube. Hardness can be varied by increasing or decreasing the number of flaps. The three-dimensional open web ensures a self-cleaning action, for easy removal of surface contamination. Depending on the process, a technically defined surface result can be achieved or a visual surface. Lipprite® Wheels are extremely versatile in satin finishing operations.

Waved Non Woven Buff

The waved construction allows for a high-density buff with minimal flexibility, an advantage when good cutting action and a uniform surface is required. This buff is suitable for all satin finishing operations, especially when equipment does not allow for oscillation.

Airflow Non Woven Buff

Usually 4 layers of non woven are fixed to a metal clinch ring. The irregular folds offer a versatile satinising tool that performs best when minimal pressure is applied, this in turn increases the surface life of the Airflow. This is a highly economical buff.

Rolls, Discs and Handpads

For manual operations, Osborn offers a selection of rolls that can be cut to width as required. Alternatively, stamped discs and standard hand-pads are available.

Abrasives Non Woven Types

A selection of the most standard non woven types.

Osborn		FEPA
Type	Grade	Norm
A2	A Coarse	AL2O3 80
A4	A Medium	AL2O3 120
A6	A Fine	AL2O3 180
A7	A Very Fine	AL2O3 240/320
S4	S Medium	SiC 120
S6	S Fine	SiC 180
S7	S Very Fine	SiC 240-320
S8	S Super Fine	SiC 500
S9	S Ultra Fine	SiC 800
S10	S Ultra Fine	SiC 1000

Coated Abrasives

Osborn offers a range of coated abrasive tools, making the most of the best materials on the market and our manufacturing expertise.

Coated Abrasive Flap Wheels

Tightly packed coated abrasive flaps arranged around a core, make an effective grinding tool prior to polishing. Round parts and tubes benefit from this product, with its long life and ability to continually reproduce the same surface.

Small Abrasive Flap Wheels with Shank

Small abrasive flap wheels on a 6 mm shank are available in non-woven, coated abrasive or a combination of both. They are suitable for use on power drills and high speed machines.

These wheels reach areas that are difficult to access. They adapt well to contours and produce a smooth uniform satin finish.

Type and Grit

Grit	40	60	80	120	150	240	320
standard	X	X	X	X	X	X	X

Don't forget that you will find a huge range of Abrasive Cutting Discs, Abrasive and Wire Brushes in the Osborn range. See www.osborn.com.

Accessories

Metal Centreplates, Nylon and Aluminium accessories can be used to reduce the inside diameter of Buffs.

Centreplates

Centreplates with ventilation holes are required to reduce the inside diameter of buffs to a bore size that suits the shaft on to which they are to be mounted. Metal centreplates are re-usable.

Interchangeable Metal Adapters

Small centreplates are specifically to reduce the buff inside diameter of 31.75 mm to a smaller size.

Nylon Centreplates and Spacer

Nylon centreplates are used to reduce the inside diameter of the buff, they can also be supplied as a combination of centreplate and spacer for quick and efficient mounting.

Mandrel

Mandrels in 6 mm are available to clamp polishing or satin finishing buffs with an inside diameter of 10 mm to 100 mm. Parts can then be used on a power drill. Mandrels are intended for repeated use.

The Right Combination for Each Step of the Process

No two customers are alike. Osborn experts are always keen to talk and identify tools, compounds and parameters that will achieve the best possible result on a given part. For now, we should just like to present some examples.

Belt Loops

This is an example of a semi-automatic process set up to polish parts used in the manufacture of designer handbags. Placed on a rotary table machine, the parts move anti-clockwise around the table, through cutting and polishing steps. The final two-step colouring process ensures that both the sides and the top of the parts have that perfect gloss.

	Cutting	Polishing	Colouring	Colouring
Tools	Airflow Sisal-Cloth Buff	Pleated Cloth Buff	Pleated Cloth Buff	Airflow Cloth Buff
	Material 82/101B natural	Material 264J	Material 5300	Material MO5
			for sides and contours	for top surface
Compounds	Unipol 433 dark pink	Gold fine 9505 blue	Gold easy 9510 cream	Osborn 1461

Locks

Sometimes designers demand different finishes over the surface of the part. With this combination of tools and compounds, parts with grooves and radii can be finished from matte to high gloss.

	Cutting	Polishing	Colouring
Tools	Waved Non-woven Buffs	Airflow Cloth Buff	Airflow Cloth Buff
	Grades S very fine/S super fine	Material 6420	Material M310
Compounds	none	Unipol 17 green	Osborn 1461 cream

Did you know that Lipprite wheels in special A medium material can replace up to two belt steps in the grinding process? This offers the advantage of a long-lasting tool with a reduced cycle time. Any white spots from prior vibratory polishing steps can be removed, shortening the subsequent polishing process.

Recommended Cutting Speeds

Material	Polishing	Colouring	Satin Finish
Steel	20-25	15-20	13-18
Non-Ferrous	16-22	13-18	13-18

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