

# Aluminum Finishing

## **SPECIFIC COLOR SOLUTIONS**



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Clariant has collected more than 100 years experience in producing chemicals and more than 50 years experience in producing dyes and chemicals for finishing anodized aluminum and provides services and a wide range of colorants and process chemicals. All core products feature Swiss quality and meet highest quality requirements. Clariant's production processes comply with latest and strictest safety and environmental regulations thanks to our modern and state of the art plants.

### **QUALITY PRODUCTS FOR ANODIZED ALUMINUM**

Clariant manufactures a full range of dyes and chemicals, many of which are patented. In 2009 Clariant introduced Sanodye grades, which do not contain heavy metals as structure element. Clariant is continuously working on the development of improved products to cover a wide spectrum of economic (energy efficiency) and environmental challenges with its products.

The manufacturing of Clariant's dyes involves multi-step synthesis and utilizes many different process technologies. Precision, cleanliness and attention to detail are key components to provide top class products into the markets. Clariant offers technical customer service for all process steps, including on-site production & operation support, tailor made solutions and work-flow optimization.

Clariant prepares recommendations for colorants, chemicals and process parameters based upon complex requirements. Wherever the anodizing industry is located, Clariant and its partners offer all necessary application tests for anodizing, coloring and sealing anodized aluminum out of technical centers located in Asia, Europe and North America.

Clariant offers several products for anodized aluminum such as dyes, process chemicals and additives.

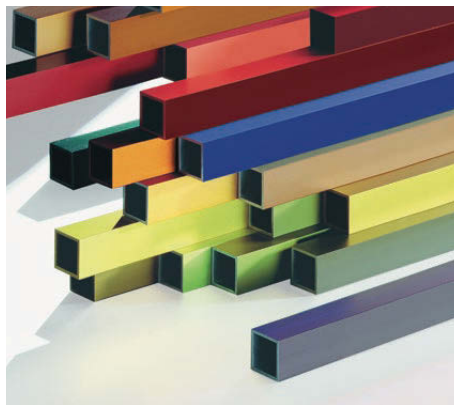
# Dyes

## OUR DYES ARE DIVIDED INTO THREE RANGES



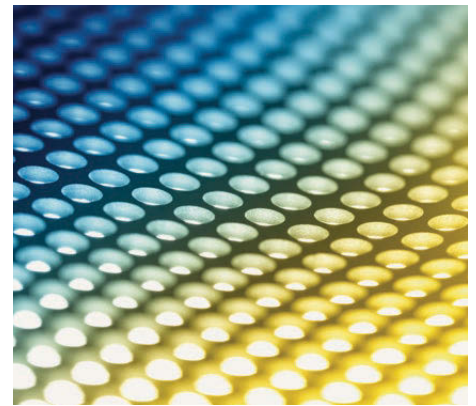
### **SANODAL®**

- Excellent light- and weather fastness properties
- Suitable for outdoor and indoor applications
- Electrolytic dyeing with subsequent adsorptive over-dyeing possible
- Broad shade range accessible
- Designed for many architectural needs



### **SANODURE®**

- Comprehensive range of colors, covering virtually all coloristic needs
- Overall good fade resistant properties
- Designed for indoor applications





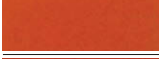























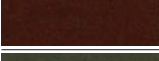





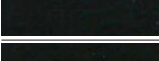




### **SANODYE®**

- Heavy metal free structure
- Overall good fade resistant properties
- Designed for interior or outdoor applications as indicated on our technical data sheets

# Dye range

## SANODAL<sup>®</sup>, SANODURE<sup>®</sup> AND SANODYE<sup>®</sup>

	NAME	MODIFICATION	OUTDOOR	INDOOR	HEAVY METAL FREE STRUCTURE	LIGHT FASTNESS
	SANODYE YELLOW 3GL	Granules	■	■	■	> 9
	SANODAL GOLD 4N	Powder	■	■		> 9 *
	SANODURE FAST GOLD L	Granules		■		7-8
	SANODURE ORANGE G	Granules		■		5-6
	SANODYE ORANGE 2B	Powder		■	■	5-6
	SANODYE GOLDEN ORANGE RLW	Granules		■	■	5-6
	SANODURE ORANGE RL	Granules		■		5-6
	SANODURE FAST BRONZE L	Granules		■		7-8
	SANODYE BROWN R	Granules		■	■	5-6
	SANODAL ORANGE 3LW LIQ.	Liquid	■	■		> 9
	SANODAL RED B3LW	Granules	■	■		> 9
	SANODYE RED GLW	Granules		■	■	7
	SANODYE RED RLW	Granules		■	■	7
	SANODURE FIERY RED ML	Granules		■		6-7
	SANODYE MAGENTA LF	Powder	■	■	■	> 9
	SANODURE BORDEAUX RL	Granules		■		6-7
	SANODURE VIOLET CLW	Granules		■		6-7
	SANODYE VIOLET MRB NEW	Powder		■	■	3-4
	SANODYE BLUE 2LW	Granules	■	■	■	> 9

	NAME	MODIFICATION	OUTDOOR	INDOOR	HEAVY METAL FREE STRUCTURE	LIGHT FASTNESS
	SANODYE BLUE G	Granules	■	■	■	> 9
	SANODAL TURQUOISE PLW LIQ.	Liquid	■	■		> 9
	SANODAL GREEN 3LW	Granules	■	■		> 9
	SANODURE GREEN LWN	Granules		■		7-8
	SANODURE BROWN GSL	Granules		■		6-7
	SANODURE BRONZE 2LW	Granules		■		7
	SANODURE BRONZE G	Granules		■		6-7
	SANODURE YELLOW BROWN 2G	Granules		■		5-6
	SANODURE OLIVE BROWN 2R	Granules		■		6
	SANODURE GREY NL LIQ.	Liquid		■		7-8
	SANODURE GREY HLN LIQ.	Liquid		■		7-8
	SANODAL BLACK 2LW	Granules	■	■		> 9
	SANODAL DEEP BLACK HBL	Paste	■	■		> 8 (12 μm) > 10 (25 μm)
	SANODAL DEEP BLACK H3LW	Paste	■	■		> 8 (12 μm) > 10 (25 μm)
	SANODURE BLACK CRO	Powder		■		3-4 (12 μm) 7-8 (25 μm)
	SANODYE BLACK OA	Granules	■	■	■	> 8
	SANODAL DEEP BLACK MLW GRAN.	Granules	■	■		> 9
	SANODAL DEEP BLACK MLW	Powder	■	■		> 9

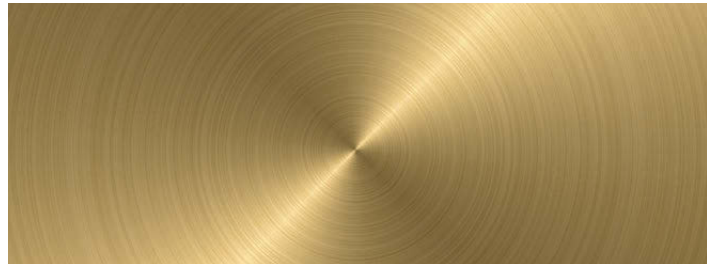
\* A "First Break" phenomena for ferrioxalate containing dyes is well known and documented in literature: Those kind of compounds show a fading after a short radiation time which then does not further degrade.

# Aluminum Finishing

## ANODAL® RANGE

### PROCESS CHEMICALS AND ADDITIVES

- Comprehensive range of chemical process additives to increase productivity, efficiency and minimize environmental impact
- Anodal chemicals deliver consistent results and constant quality
- Designed to allow our customers to improve their processes and meet changing industry demands
- Tailored to the special needs of our dye ranges (SANODAL, SANODYE, SANODURE)



NAME	MODIFICATION	PROCESS STEP	DESCRIPTION
ANODAL EC-2	Liquid	Etching	Long term etching additive, complexing and leveling additive for high aluminum loads containing etching tanks (> 150 g/L), specially developed for matt finishing (E6), additionally suitable for zinc containing alloys, no silicate and chlorate added
ANODAL EE	Liquid	Anodizing	Surface levelling, burning prevention, reduced refrigerating temperature, hard coating
ANODAL SUAC	Liquid	Anodizing	Additive for the integral coloring process
ANODAL COLOR S-2	Liquid	Electrolytic Coloring	Metal free structure stabilizer for tin sulfate coloring, throwing power trigger, leveling agent
ANODAL SH-1	Liquid	Sealing	Anti-smutting, hot water sealing additive (> 96 °C)
ANODAL SH-2	Liquid	Sealing	Anti-smutting, mid-temperature sealing additive (82-90 °C)
ANODAL ASL	Liquid	Sealing	Anti-smutting, hot nickel sealing additive (> 96 °C)
ANODAL MS-1	Liquid	Sealing	Anti-smutting, nickel containing sealing additive, mid-temperature nickel sealing (75-85 °C)
ANODAL WT-1	Liquid	Waste Water	Flocking additive for waste water treatment, removal of dissolved dyestuff
ANODAL WL SPEC.	Liquid	Etching/Sealing	Additive recommended for etching baths and Anodal ASL baths to improve the flow of the solution after treatment









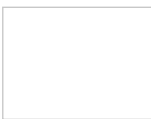
# Aluminum Finishing ALUPRINT™ RANGE

## ALUPRINT

Preparations for accurate silk screen printing on anodized aluminum surfaces.

- Formulated to lock-in multi-colored text and patterns into the anodized aluminum
- Printing and Dip-Dyeing combinations possible
- An easy to absorb solvent based dye preparation
- Suitable for indoor applications



NAME	
	ALUPRINT YELLOW 3R
	ALUPRINT RED 3R
	ALUPRINT TURQUOISE 3R
	ALUPRINT BLUE 3R
	ALUPRINT BLACK 3R
	ALUPRINT DILUENT LIQUID
	ALUPRINT REDUCER 3R



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