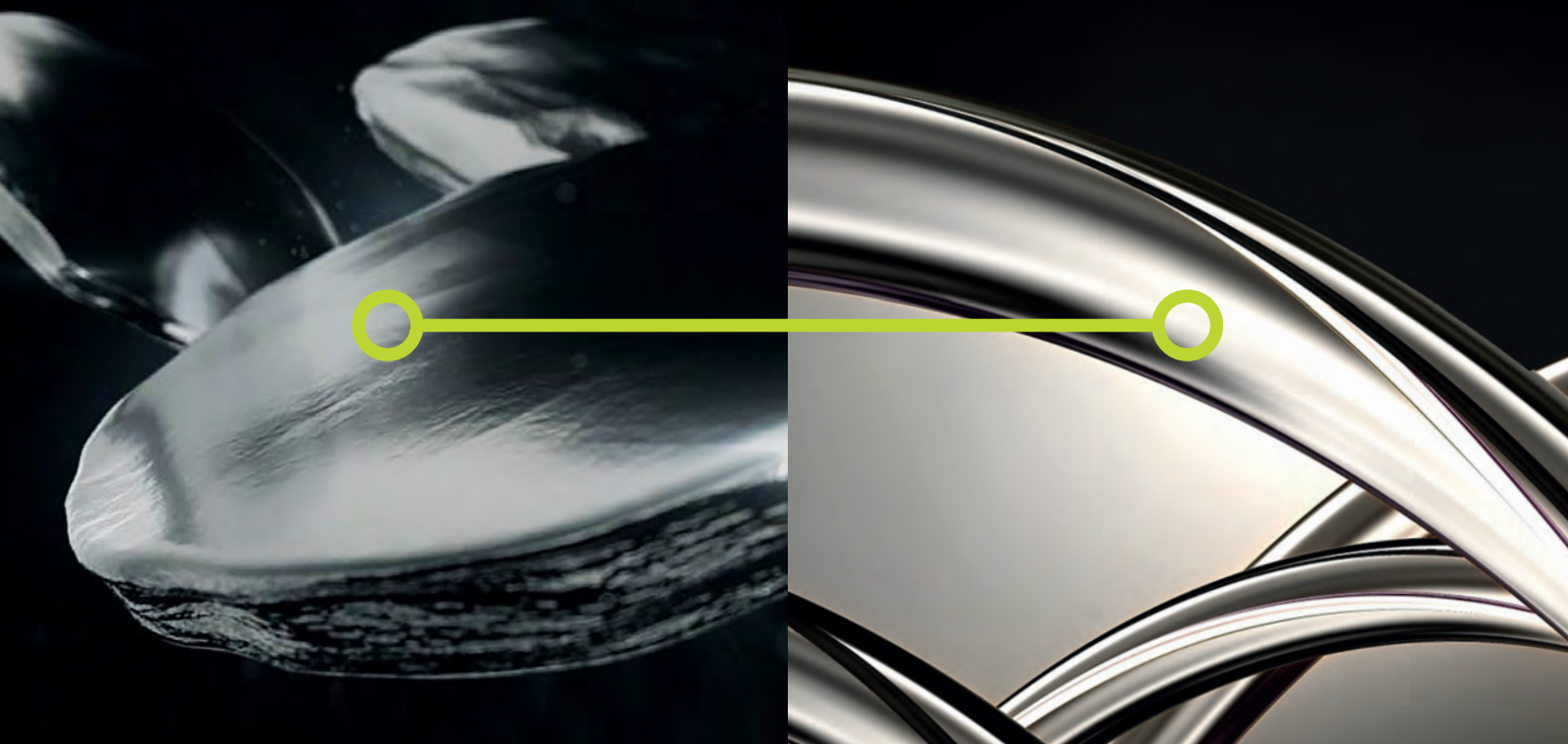


SILBERLINE™

— FROM SCIENCE TO SHINE™

METALLIC PIGMENTS FOR PLASTICS

PRODUCT DATA & SELECTION GUIDE



WE ARE SILBERLINE™

**WE TRANSFORM RAW MATERIALS FROM SCIENCE TO SHINE™
BEAUTIFYING THE PRODUCTS OF OUR CUSTOMERS THROUGHOUT THE WORLD.**

Silberline thrives on a passion for innovation in creating the finest aluminium pigments for the brightest, most appealing effects possible. We are equally committed to supporting a balanced environment by seeking sustainable solutions in all we do.

Silberline's many lines of aluminium pigments can be used in multiple plastic applications such as automotive interior, exterior, appliances, computers, electronics, and high end packaging or any application where a high aesthetic appearance is desired.

With a wide range of particle sizes, geometry and delivery form options, the possibilities for applying our products are as limitless as your imagination.

Our products are based on a comprehensive palette of high-performance metallic pigments designed for the demanding needs of this industry. Our products have been developed to provide a unique combination of aesthetics, polymer compatibility, and functionality.



Pigments with smaller particle sizes provide better opacity



Pigments with larger particle size offer more sparkle, brightness, and flop characteristics



Pigments with wider particle size distribution provide better opacity



Pigments with narrow particle size distributions can be used with chromatic colorants to provide cleaner colors

SILVET®

Silvet® pellet technology provides aluminum pigment in a low-dusting, low-VOC pellet or granule for a variety of polymers. Suitable for an extensive range of functional and aesthetic applications, the high metal content and carrier types allow the formulator flexibility with selected designs. Silvet® E1 FDA pellet technology allows for broader FDA compliance requirements over standard pellet technology.



Available in: E Series - PE Wax pellet form E1 Series - PE Wax granule form P Series - Acrylic granule form

SPARKLE SILVET E1	GEOMETRY	D (50%) MICRONS	FLASH POINT °F	CARRIER	% CARRIER
SPARKLE SILVET 960-30-E1	Polished Corn Flake	14	575	PE Wax	30
SPARKLE SILVET 880-30-E1	Polished Corn Flake	28	575	PE Wax	30
SPARKLE SILVET 790-30-E1	Polished Corn Flake	45	575	PE Wax	30
SPARKLE SILVET 755-30-E1	Polished Corn Flake	64	575	PE Wax	30
SPARKLE SILVET 730-30-E1	Polished Corn Flake	250	575	PE Wax	30
SILVET 440-30-E1	Silver Dollar	84	575	PE Wax	30
SILVET 430-30-E1	Silver Dollar	175	575	PE Wax	30
SPARKLE SILVET PREMIER 980-30-E1	Silver Dollar	12	575	PE Wax	30
SPARKLE SILVET PREMIER 950-30-E1	Silver Dollar	16	575	PE Wax	30
SPARKLE SILVET PREMIER 890-30-E1	Silver Dollar	20	575	PE Wax	30
SPARKLE SILVET PREMIER 860-30-E1	Silver Dollar	24	575	PE Wax	30

SPARKLE SILVET FDA	GEOMETRY	D (50%) MICRONS	FLASH POINT °F	CARRIER	% CARRIER
SPARKLE SILVET 960-30-FDA	Corn Flake	14	575	PE Wax	30
SPARKLE SILVET 880-30-FDA	Corn Flake	28	575	PE Wax	30
SPARKLE SILVET 795-30-FDA	Corn Flake	35	575	PE Wax	30
SPARKLE SILVET 790-30-FDA	Corn Flake	47	575	PE Wax	30
SPARKLE SILVET 760-30-FDA	Corn Flake	55	575	PE Wax	30
SPARKLE SILVET 755-30-FDA	Corn Flake	64	575	PE Wax	30
SPARKLE SILVET 764-30-FDA	Corn Flake	80	575	PE Wax	30
SPARKLE SILVET PREMIER 950-30-FDA	Silver Dollar	16	575	PE Wax	30
SILVET 440-30-FDA	Silver Dollar	84	575	PE Wax	30

SILVET E	GEOMETRY	D (50%) MICRONS	FLASH POINT °F	CARRIER	% CARRIER
SILVET 330-30-E	Corn Flake	8	575	PE Wax	20
SILVET 220-20-E	Corn Flake	9	575	PE Wax	20
SILVET 110-20-E	Corn Flake	18	575	PE Wax	20
SILVET 620-20-E	Corn Flake	21	575	PE Wax	20
SPARKLE SILVET 960-25-E	Polished Corn Flake	14	575	PE Wax	25
SPARKLE SILVET 880-20-E	Polished Corn Flake	28	575	PE Wax	20
SPARKLE SILVET 790-20-E	Polished Corn Flake	35	575	PE Wax	20
SPARKLE SILVET 760-20-E	Polished Corn Flake	55	575	PE Wax	20

FINE & BRIGHT EFFECT PIGMENTS PLASTICS PRODUCT PORTFOLIO

Silberline continues to promote and commercialize additions to its line of ultra-fine, narrow particle size effect pigments. With each effort, appearance, opacity and costs are balanced to create new grades of effect pigments for the brightest and most reflective appearance for paint replacement and mold-in-color applications. Silberline continues to promote and commercialize additions to its line of ultra-fine, narrow particle size effect pigments for plastics. These pigments can also be provided in Silvex paste form when needed.



SPARKLE SILVET® (LIQUID METAL LM)

These fine and bright pigments offer a brilliant shine. With little or no grain and a smooth patina they provide the solid metallic appearance of pure metal, this highly reflective surface is valued in high-end applications such as automotive interiors and electronics.

SPARKLE SILVET LIQUID METAL	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
Elite Liquid Metal 011-30-E1	Silver Dollar	11	PE Wax/Resin	30
Elite Liquid Metal 015-30-E1	Silver Dollar	15	PE Wax/Resin	30
Ultra Liquid Metal 011-30-E1	Silver Dollar	11	PE Wax/Resin	30
Ultra Liquid Metal 020-30-E1	Silver Dollar	20	PE Wax/Resin	30

SPARKLE SILVET ULTRA & ELITE E1	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
SPARKLE SILVET ULTRA 008-30-E1	Silver Dollar	8	PE Wax	30
SPARKLE SILVET ULTRA 095-30-E1	Silver Dollar	9.5	PE Wax	30
SPARKLE SILVET ULTRA 011-30-E1	Silver Dollar	11	PE Wax	30
SPARKLE SILVET ULTRA 017-30-E1	Silver Dollar	17	PE Wax	30
SPARKLE SILVET ELITE 008-30-E1	Silver Dollar	8	PE Wax	30
SPARKLE SILVET ELITE 012-30-E1	Silver Dollar	12	PE Wax	30

SPARKLE SILVET® P

Silvet® P is a family of aluminum pigment grades designed for improved compatibility with a variety of engineering resins including Polycarbonate, ABS, ASA and Acrylics. Silvet® P grades are provided in pellet form and are composed of 80% aluminum pigment and 20% Acrylic carrier. The carrier is designed for use with engineered plastics to maximize polymer compatibility resulting in increased polymer clarity and improved pigment aesthetics.

SPARKLE SILVET & ULTRA P	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
SPARKLE SILVET 960-20-P	Polished Corn Flake	14	Acrylic	20
SPARKLE SILVET 790-20-P	Polished Corn Flake	45	Acrylic	20
SPARKLE SILVET PREMIER 890-20-P	Silver Dollar	20	Acrylic	20
SPARKLE SILVET PREMIER 860-20-P	Silver Dollar	24	Acrylic	20
SPARKLE SILVET ULTRA 011-20-P	Silver Dollar	11	Acrylic	20
SPARKLE SILVET ULTRA 017-20-P	Silver Dollar	17	Acrylic	20
SPARKLE SILVET ELITE 008-20-P	Silver Dollar	8	Acrylic	20
SPARKLE SILVET ELITE 012-20-P	Silver Dollar	12	Acrylic	20

TUFFLAKE® Premier Series

TUFFLAKE® Premier grades are silver dollar aluminium pigments with a highly polished reflective surface and a narrow particle size distribution. Plastics containing aluminium pigments may be subject to tremendous shear forces during processing. These mechanical forces can have the tendency to dull the metallic appearance of the final product by breaking and deforming the individual aluminum flakes. Silberline's TUFFLAKE® line of pigments is specifically engineered to resist these mechanical forces and maintain their targeted appearance.

GRADE	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
TUFFLAKE Premier 013-30-E1	Silver Dollar	13	PE Wax/Resin	30
TUFFLAKE Premier 018-30-E1	Silver Dollar	18	PE Wax/Resin	30
TUFFLAKE Premier 024-30-E1	Silver Dollar	24	PE Wax/Resin	30
TUFFLAKE Premier 032-30-E1	Silver Dollar	32	PE Wax/Resin	30



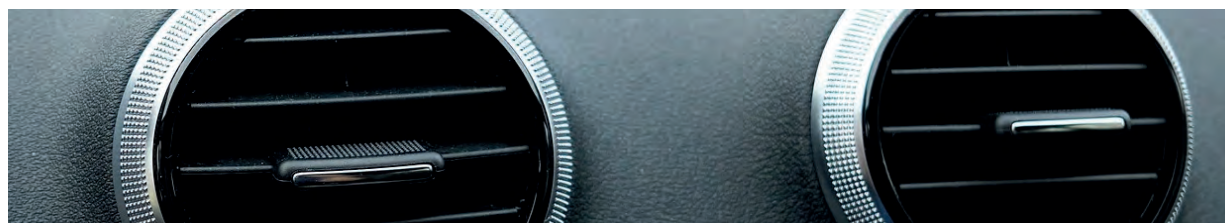
SPHERICAL PIGMENT GEOMETRY

These grades were developed to provide aluminum pigments with two novel effects:

- **Flow line reduction**
- **The potential for creating alluring and novel aesthetics in plastics**

These characteristics are created by changing the shape of the aluminum pigment from the traditional 2-dimensional “flake” geometry to a 3-dimensional “spherical” geometry. When using these unique spherical highly polished aluminum pigments, light is reflected across multiple viewing angles creating a shimmering 3-D pinpoint sparkle effect.

EXTRA SPARKLE SILVET®	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
Extra SPARKLE SILVET 600-10-E1	Spherical	20	PE Wax	10
Extra SPARKLE SILVET 400-10-E1	Spherical	30	PE Wax	10
Extra SPARKLE SILVET 300-10-E1	Spherical	43	PE Wax	10



SILVEX®

Silberline's aluminum pigments are wetted with a high boiling point carrier with very low residual solvent content. These could be safely used in most polymer processing applications, replacing non-recommended dry and solvent paste aluminum pigments. Silvex MO pigments are now FDA and EU Food Contact compliant.



Available in: DOA—Diocetyl-Adipate Dampened Powder/Paste MO—Mineral Oil Dampened Powder/Paste

SILVEX	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
SILVEX 330-20-C	Corn Flake	8	MO	20
SILVEX 223-20-C	Corn Flake	14	MO	20
SILVEX 113-20-C	Corn Flake	18	MO	20
SILVEX 620-20-C	Corn Flake	21	MO	30
SPARKLE SILVEX 963-30-C	Polished Corn Flake	14	MO	30
SPARKLE SILVEX 883-20-C	Polished Corn Flake	28	MO	20
SPARKLE SILVEX 793-20-C	Polished Corn Flake	35	MO	20
SPARKLE SILVEX 760-20-C	Polished Corn Flake	55	MO	20
SPARKLE SILVEX 755-20-C	Polished Corn Flake	64	MO	20
SPARKLE SILVEX 440-15-C	Polished Corn Flake	84	MO	15
SPARKLE SILVEX 750-20-C	Polished Corn Flake	90	MO	20
SPARKLE SILVEX 430-15-C	Polished Corn Flake	170	MO	15
SPARKLE SILVEX ULTRA 0008-20-C	Silver Dollar	8	MO	20
SPARKLE SILVEX ULTRA 0011-20-C	Silver Dollar	11	MO	20
SPARKLE SILVEX ULTRA 0017-20-C	Silver Dollar	17	MO	20
SPARKLE SILVEX PREMIER 980-20-C	Silver Dollar	12	MO	20
SPARKLE SILVEX PREMIER 950-20-C	Silver Dollar	16	MO	20
SPARKLE SILVEX PREMIER 890-20-C	Silver Dollar	20	MO	20
SPARKLE SILVEX PREMIER 840-20-C	Silver Dollar	33	MO	20

SILVEX DOA	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
SILVEX 335-20-DOA	Corn Flake	8	DOA	20
SILVEX 225-20-DOA	Corn Flake	14	DOA	20
SILVEX 115-20-DOA	Corn Flake	18	DOA	20
SILVEX 620-25-DOA	Corn Flake	21	DOA	25
SPARKLE SILVEX 965-30-DOA	Polished Corn Flake	14	DOA	30
SPARKLE SILVEX 885-20-DOA	Polished Corn Flake	28	DOA	20
SPARKLE SILVEX 795-20-DOA	Polished Corn Flake	35	DOA	20
SPARKLE SILVEX 760-20-DOA	Polished Corn Flake	55	DOA	20

EXTRA SPARKLE SILVEX	GEOMETRY	D (50%) MICRONS	CARRIER	% CARRIER
EXTRA SPARKLE SILVEX 600-10-C	Spherical	20	MO	10
EXTRA SPARKLE SILVEX 400-10-C	Spherical	30	MO	10
EXTRA SPARKLE SILVEX 300-10-C	Spherical	43	MO	10

No matter where you are,
we've got you covered.

SILBERLINE[™]
FROM SCIENCE TO SHINE[™]

Silberline customer service centers around the globe are ready to assist you with product samples, literature requests, technical assistance and more. From concept to commercialisation and all stages in between, we are at your service with prompt, proven performance.

For technical assistance, email us at: technology@silberline.com or call us at 570-668-6050 or 877-492-7881 (toll-free in U.S. and Canada). For assistance in selecting the Silberline products to meet your needs or to request product literature, contact your local Silberline representative.

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