

MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2024-276
Item to be Scouted	Glass Beads
Days to be scouted	30
Response Due By	10/11/2024
Description	SWARCO is requesting a temporary nationwide waiver from the FHWA for the sale of our 1.65 to 1.67 refractive index glass beads to be used on federally funded road marking projects.
Notify Requester Immediately	
State item to be used in	Texas

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	2nd Supplier
Describe the manufacturing processes (elaborate to provide as much detail as possible)	The 1.65 - 1.67 glass beads are manufactured using a direct melt glass manufacturing process using a special glass chemistry composition to meet the refractive index and durability requirements. A typical reflective glass bead for roadway markings has a refractive index of 1.5. Some markings, primarily airport markings, require glass beads with a refractive index of 1.9. Neither the 1.5 or 1.9 index beads provide the same retro reflectivity performance or durability in their applications.
Provide dimensions / size / tolerances / performance specifications for the item	The 1.65 - 1.67 refractive index glass beads must be offered in the 14 to 70 U.S. mesh size range, must be clear in color, and no less than 80% roundness (no more than 20% can be oblong, double, jagged, etc.). Customers require them to be packaged in 50 lb. three ply paper bags and palletized for truck transportation.
List required materials needed to make the product, including materials of product components	A batching system (silos, elevators, mixers, material handling equipment), glass melter (natural gas fired or electric), screening/sizing and packaging equipment are required. The special glass chemistry requires dolomite, quartz sand, alumina oxide, calcium carbonate and other raw materials typically found in the glass making industry.
Are there applicable certification requirements?	No
Are there applicable regulations?	Yes
Details	Complete manufacturing process needs to be located in the United States to be BABA compliant.
Are there any other standards, requirements, etc.?	No
NAICS 1	327212 Other pressed and blown glass and glassware manufacturing
NAICS 2	
Additional Technical Comments	

Section 4: Business Information

Estimated potential business volume	Three to six million lbs. per year
Estimated target price / unit cost information (if unavailable explain)	About \$2.60 to \$3.00 per lb.

When is it needed by?	Immediate. Required for road marking contractors primarily during the road construction season (typically between March and October).
Describe packaging requirements	Packaged in 50 lb. bags, palletized for transportation by truck (van or flatbed). Shipping quantities anywhere from 2,000 to 44,000 lbs. at a time.
Where will this item be shipped?	Nationwide to road marking contractor warehouses or directly to job sites.

Additional Comments

Is there other information you would like to include?	<p>The attached file is the product brochure of the 1.65 - 1.67 refractive index glass beads that we import from our sister company in Austria. Please verify that there is no U.S. manufactured equivalent in the volumes and quality required as outlined above.</p> <p>Contact information for questions including BABA/Buy American compliance:</p> <p>Federal Highway Administration (FHWA) Brian R. Hogge (brian.hogge@dot.gov) or Edwin Okonkwo (Edwin.Onkonkwo@dot.gov) Director, Office of Preconstruction, Construction, and Pavements FHWA Office of Infrastructure</p> <p>Please copy scouting@nist.gov on all correspondence.</p>
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THE NEXT GENERATION OF GLASS BEADS
SWARCO DURALUX



SWARCO | The Better Way. Every Day.

swarco 
Road Marking Systems

THE NEXT GENERATION OF GLASS BEADS



OUR PHILOSOPHY

OUR GUIDING PRINCIPLE

As a premium reflective glass-bead product, SWARCO DURALUX is particularly durable, simple to apply, and ensures increased road safety thanks to its exceptional retroreflection.

OUR VISION

SWARCO DURALUX sets the economical and technical benchmark worldwide for the next generation of reflective glass beads, with superior performance in wet and dry conditions.

OUR VALUES

Innovation, Sustainability,
Reliability

OUR MOTTO

SWARCO DURALUX
the next generation of glass beads

SWARCO DURALUX

The unique glass formulation combined with a state of the art beading process SWARCO DURALUX is the result of many years of research and development – an innovation from the SWARCO Road Marking Systems Division's Competence Center for Glass Technology and Marking Systems.


SWARCO DURALUX | the next generation of glass beads | 4

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- Diameters from 212 to 1400 μm / 14 to 70 US mesh
 - Excellent retroreflection values
 - Special glass composition


Crystal-clear advantages

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- Increased visibility and safety for the motoring public
 - Achieves excellent retroreflection values
 - Exceptionally durable thanks to the special glass composition
 - Provides exceptional long-term reflectivity performance, even after several years of traffic exposure
 - Suitable for all road marking materials
 - Tailored precisely to individual customer requirements
 - Increased anti-skid values with high retroreflection possible

Visibly better

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- Retroreflection values of over 1000 $\text{mcd/m}^2\text{lx}$
 - Excellent retroreflection even in coloured road markings
 - Ideally suited for construction zone sites, accident black spots, zebra crossings
 - Excellent visibility at night and in wet and foggy conditions

Noticeably more cost-effective

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- Long service life
 - Reduced costs for remarking
 - Optimised price/performance ratio



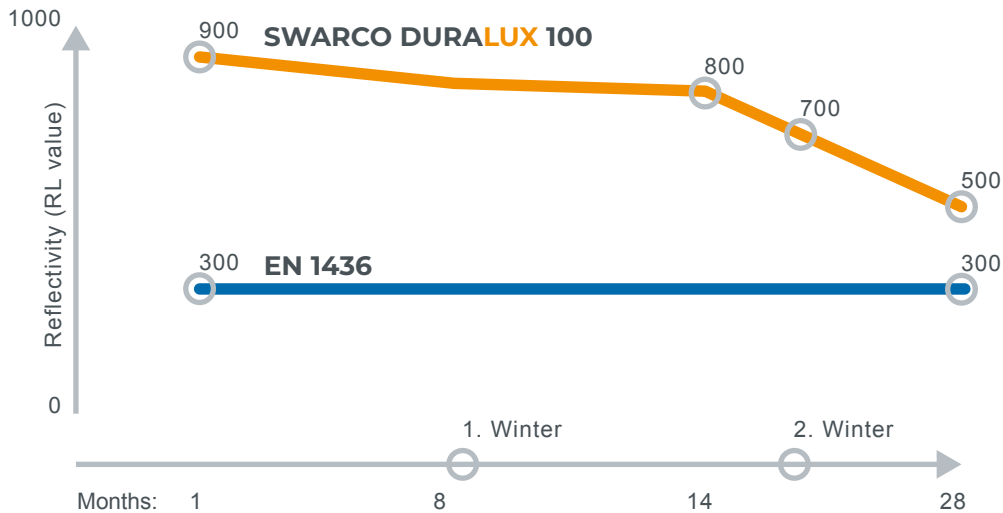
EXCELLENT RETRO- REFLECTION

Higher retroreflection means lower accident risk

The study "Investigation of longitudinal pavement marking retroreflectivity and safety" (Carlson, Park & Kang, 2013) verifies that every 100 mcd/m²*lx increase in retroreflection reduces the risk of accidents by up to 8.6 percent.

The SWARCO DURALUX bead brings the results of this study to the road. Thanks to its excellent retroreflectivity, this bead substantially increases road safety and can save lives. Particularly at night and in foggy or rainy weather, road markings can be seen much more clearly – precisely when they are most important to road users! The reflectivity (RL value) of SWARCO DURALUX is outstanding.

The chart proves impressively that the reflectivity of SWARCO DURALUX beads far surpasses even the strictest requirements of EN 1436 Class R5 over a period of 28 months. A first measurement was carried out one month after marking with SWARCO DURALUX beads. Further tests were performed after eight months, 14 months, and 28 months. They show clearly that the SWARCO DURALUX bead still has excellent retroreflection values even after several winters.



Location: Wardenburg, Germany, Road Marking Material: White Cold Plastic / MMA.

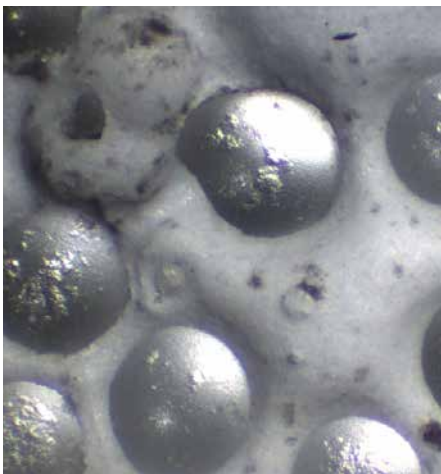
VERY DURABLE SWARCO DURALUX

SWARCO DURALUX impresses also in the abrasion test. This test was conducted on a rotating machine with three different bead types under identical conditions.

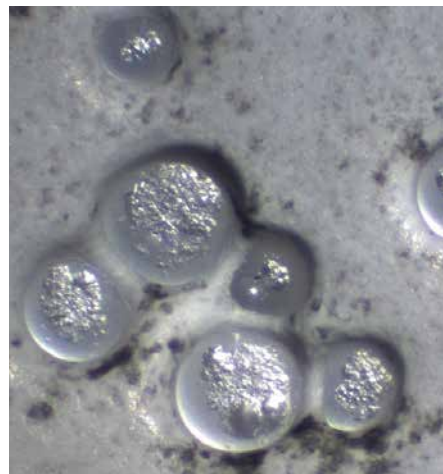
SWARCO DURALUX beads are not only more durable than standard and high-index beads, but also measurably more durable. SWARCO DURALUX beads therefore not only increase the safety of road users over a longer period, but also offer clear economic benefits.

The test also shows that SWARCO DURALUX beads have practically no defects, flaking, or signs of wear. All factors that underline the exceptional durability of SWARCO DURALUX beads. They are far tougher than other bead types.

Roadmarking professionals can be certain that they will achieve the required values, and sustainably increase road safety thanks to the higher retroreflection.



Standard glass beads



High-index glass beads



SWARCO DURALUX

SWARCO | The Better Way. Every Day.

SHOWING THE WAY, WORLDWIDE

In 1969 we started out with the manufacture of tiny reflective glass beads. Today we have grown into the world's largest systems provider for road markings. Making roads safer and saving lives on a daily basis. Our high quality products and services, safely direct traffic flow from A to B, every day and night. On all roads, in any weather, and all from SWARCO.

We prepare for the future, by fusing knowledge with innovation at our Competence Center for Glass Technology and Marking Systems. So, even with smart and autonomous driving, we continue to blaze the trail of premium road markings to the world. Jump in and drive with us; we will be happy to help you find your ideal road marking solutions.

www.swarco.com/rms

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