MMA RESIN

ROAD MARKING & INDUSTRIAL

Excellence
and Precision
in Every Drop
of Premium
MMA RESIN

STILACRYL®
MMA
High Durability. High Visibility

ROAD MARKING & INDUSTRIAL
MMA RESIN Products and Solutions

Stil GROUP
ROAD SAFETY & ROAD MARKING

Stil GROUP
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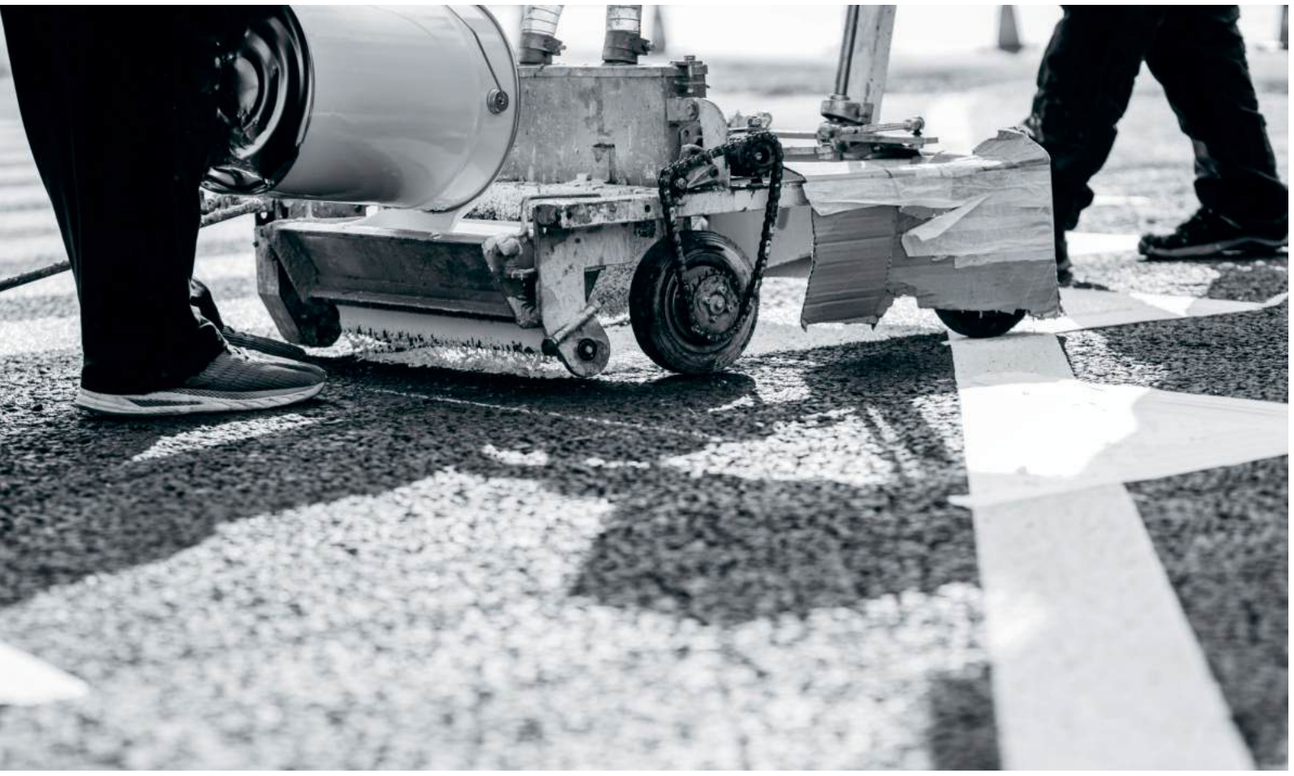


The Chemistry of Road Safety.

Road markings have a significant impact on reducing traffic accidents and lowering fatality rates. Studies show that on roads with proper and well-maintained road markings, traffic accidents can be reduced by up to 30%. Additionally, it has been found that in areas where clear and effective road markings are used, fatality rates can decrease by 20-25%. These statistics highlight the crucial role that road markings play in enhancing driver awareness and improving road safety.

As Stil Group, we integrate the production of road marking paints, glass beads, resins, and machines, managing road marking applications within our operations. Additionally, as an authorized distributor of Graco, we provide comprehensive solutions that contribute to road safety.

LINES THAT CONNECT LIVES

Stilacryl® MMA resin creates clear, lasting road lines that save lives.

SMOOTHER TRAFFIC FLOW

Clear road lines regulate traffic flow and help drivers make quick decisions.

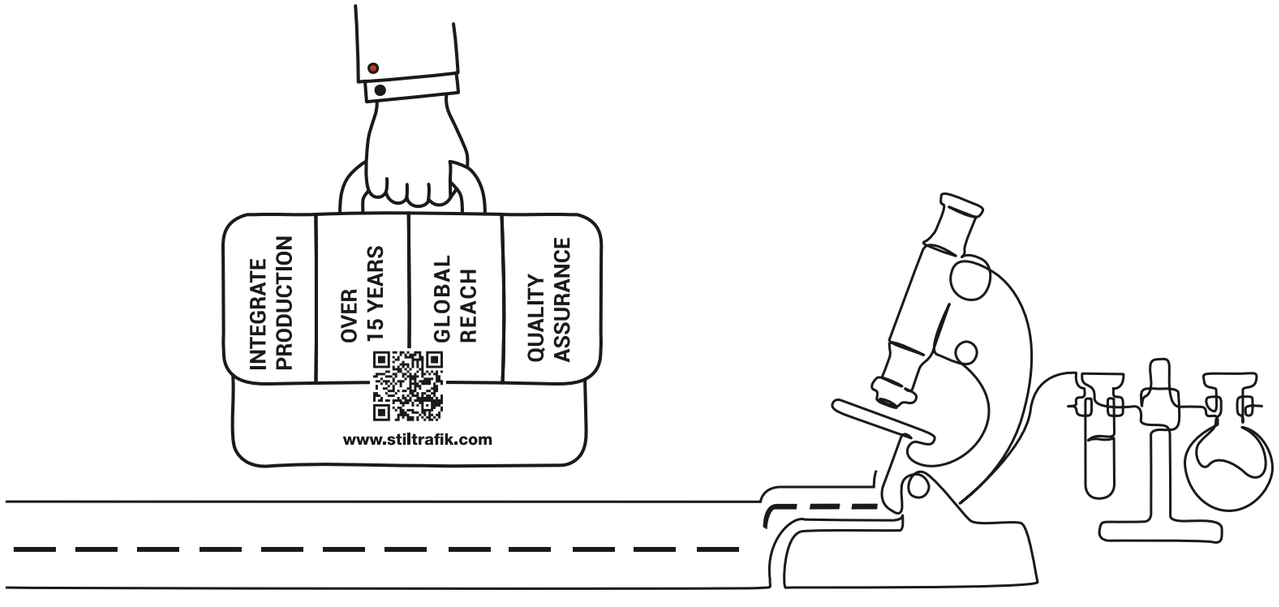
ENVIRONMENTAL SUSTAINABILTY

Stil Group' s eco-friendly MMA resin offers sustainable road marking solutions.

MMA STILACRYL®

STILACRYL® is a distinguished brand under STIL GROUP, specializing in chemical solutions.

#staywithinthelines



STILACRYL® MMA
High Durability. High Visibility

ROAD MARKING MMA RESIN

Stil GROUP
ROAD SAFETY & ROAD MARKING

INNOVATION

SUSTAINABLE ROAD SAFETY
WITH STIL GROUP

At Stil Chemical, we combine innovation and high performance to deliver superior solutions for road marking systems. Our Stilacryl® MMA road marking resin is designed with a specialized formulation to meet the most demanding industry requirements. This resin enhances road safety through its fast curing time and long-lasting durability, while also improving the efficiency of the application process.

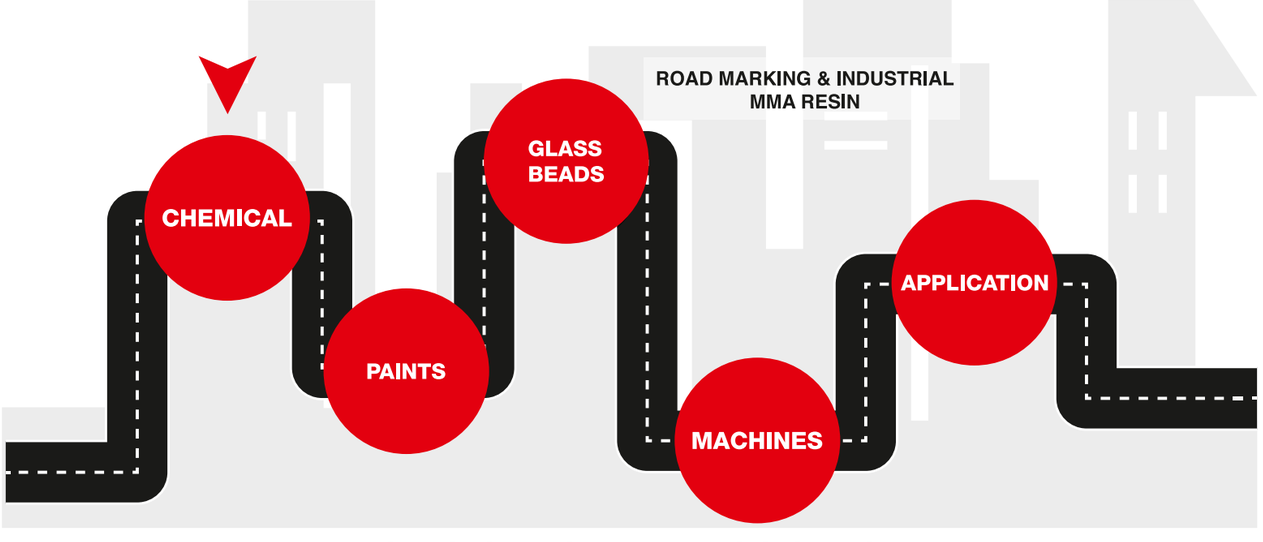
STILACRYL® MMA RESIN

Stilacryl® MMA resin, with its methyl methacrylate (MMA) component, offers exceptional adhesion and chemical resistance. These qualities ensure that the material performs reliably across various climate and road conditions. Stil Chemical remains committed to continuous improvement and quality, providing innovative solutions that meet our customers' needs

In conclusion, MMA road marking resin is an ideal solution for those seeking excellence in road marking applications. With its performance, durability, and eco-friendly features, this innovative resin not only enhances road safety but also contributes to a sustainable future..

MMA road marking resin stands out with its ease of application and rapid curing features. This accelerates work processes and ensures that traffic flow continues uninterrupted. With advanced application techniques and high-quality control standards, our resin delivers the highest performance levels in the industry.

Stil Group adopts a fully integrated approach in its road marking solutions. Our company manufactures road marking paints, road marking glass beads, road marking machines and road marking resins within its own operations. This comprehensive production process ensures that all components work in harmony, enabling the execution of high-quality road marking applications. Stil Group's integrated approach guarantees the optimal performance of each component and facilitates the efficient management of road marking processes.



STIL GROUP ROAD MARKING SYSTEMS

LOGISTICS MANAGEMENT

STRATEGIC NETWORK
QUICK SOLUTIONS

Stil Group's strategic network is designed to deliver quick solutions, ensuring that our customers receive high-quality products with exceptional efficiency. Our MMA resin, known under the Stilacryl® brand, benefits from a well-structured storage system that plays a crucial role in maintaining its high performance and reliability. The resin must be stored in a controlled environment, away from extreme temperatures and moisture, to preserve its chemical properties and ensure its effectiveness in road marking applications.

The strategic importance of having our distribution center located in Türkiye cannot be overstated. Türkiye's central position between Europe, Asia, and the Middle East provides a logistical advantage, facilitating swift access to a wide range of markets. This geographical benefit allows Stil Chemical to execute rapid delivery, minimizing transit times and meeting urgent demands efficiently.

Stilacry® MMA resin is produced in 200 kg barrels and 1000 kg IBC packages upon request.

STILACRYL® MMA
High Durability. High Visibility

ROAD MARKING MMA RESIN

Stil GROUP
ROAD SAFETY & ROAD MARKING

STILACRYL® SOLUTIONS

HIGH-QUALITY PRODUCTION STANDARDS

In the production and formulation of road marking materials, precision in selecting and processing components such as binders and pigments is crucial to achieving high performance and consistency.
The formulation process must carefully balance factors like traffic conditions, road surface types, and environmental influences to ensure the materials function optimally. Accurate application is equally important, requiring meticulous management of material selection, application techniques, and equipment calibration to achieve durable and effective road markings. In this system, the use of MMA resin is particularly important for its role in enhancing the durability, visibility, and overall efficiency of the road marking, making it a key component in delivering long-lasting solutions.

The primary binder-based road marking systems currently in use include:

Solvent-Based Paints: These high solids content paints are applied via spraying and dry physically through the evaporation of the solvent (emitting VOC). Only thin layers (< 1 mm) are feasible with this system.

Water-Based Paints: These paints dry physically through the evaporation of water and a small amount of solvent and ammonia components (almost no VOC emission). Only thin layers (< 1 mm) can be applied.

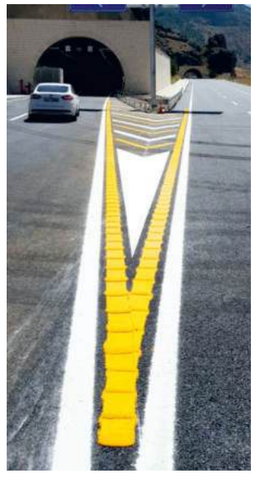
Thermoplastics: Heated to 200 to 220 °C (390 to 430 °F), these materials are applied as a melt by spraying or extrusion and cure by solidification (VOC free). Both thin and thick layers are feasible.

Cold Plastics: Mixed with a curing component, these are applied at ambient temperatures by spraying or extrusion and cure chemically through polymerization (almost no VOC emission). Both thin and thick layers can be applied.

STILACRYL® ROAD MARKINGS:
Stilacryl® cold plastic systems are designed as reactive two- or multi-component formulations using Stilacryl® binders. The polymerization is achieved by adding a curing component before application. The chemical curing process occurs after a specific period, with volatile resin components becoming chemically bound within the resulting inert polymer, resulting in minimal VOC emissions. Thanks to their exceptional durability, Stilacryl® based cold plastics offer the most efficient and environmentally friendly solutions for road marking.

Excellent Durability

Stilacryl® cold plastic road markings offer exceptional durability against heavy traffic and harsh weather conditions. Tests indicate that Stilacryl® products typically provide 3-5 years of high-performance lifespan, with superior resistance to wear and tear from traffic.



Quick Drying

Stilacryl® cold plastics dry quickly after application. Typically, the markings can be opened to traffic within 30-60 minutes. This rapid drying time enhances road safety and minimizes operational downtime.

Superior Visibility

Stilacryl® cold plastics with glass beads feature high reflective properties, ensuring excellent visibility during nighttime driving. This significantly improves road safety and reduces accident risks. Reflective values are generally measured between 0.9 and 1.2, providing high visual clarity.

EXPERT GUIDANCE

COLD PLASTIC PREPARATION

The creation of Stilacryl® cold plastic road marking materials involves blending binders, pigments, fillers, additives, and glass beads in precise proportions. Depending on the specific formulation, coarse fillers and intermixed beads may also be included. Typically, a cold spray plastic mixture will consist of binders, pigments, additives, and fine fillers.
To prepare Stilacryl® cold plastic material, the following steps should be followed:
Safety measures: It is essential to use explosion-proof equipment. Containers should be opened with non-sparking tools, and to prevent MMA evaporation, the containers should be kept closed or covered. The stirring speed must be adjustable, and overheating the mixture above 40 °C (104 °F) should be avoided.
Mixing process: Begin by pouring the Stilacryl® binder into the mixer. While continuously stirring, gradually add the additives, pigments, and fine fillers. Finally, add the coarse fillers and intermixed beads to complete the mixture.
Viscosity adjustments: The mixture's viscosity should be adjusted to ensure proper mixing of fillers, pigments, and additives. These adjustments will influence the flow behavior and the application of reflective materials, such as glass beads.
Discharge process: During discharge, the bottom outlet should have a minimum diameter of 5 cm (2 inches) to ensure smooth flow of the high-viscosity cold plastic material.

Excellent Adhesion

These products provide excellent adhesion to various surfaces. They form a strong bond with concrete, asphalt, and other road surfaces, ensuring that the markings remain intact for extended periods.

High Weather Resistance

Cold plastics perform exceptionally well even in low temperatures. They can be applied effectively in temperatures as low as -10°C (14°F), improving safety in winter conditions.

STILACRYL® MMA
High Durability. High Visibility

ROAD MARKING MMA RESIN

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PERFORMANCE OPTIMIZATION

VISCOSITY
CONTROL AGENTS

Drop-on Glass Beads
For daytime and nighttime visibility, drop-on glass beads must be applied to road markings. Larger reflective glass beads (up to 2.5 mm) are recommended for enhanced wet-night visibility. Typically, 150-400 g/m² of glass beads are used for cold plastic and 400-600 g/m² for cold spray plastic.
These drop-on beads may include a small fraction of anti-skid aggregates to adjust skid resistance. However, excessive application of glass beads and anti-skid aggregates, especially if too fine, can result in excessive soiling of the road marking surface.

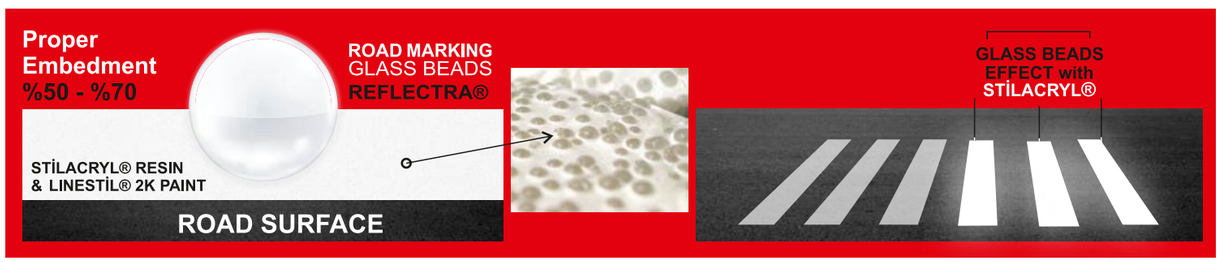
Intermix and reflective glass beads
Uncoated or silicon-coated glass beads should be avoided due to poor adhesion. Additionally, silicone-treated glass beads should not be used as drop-on beads for cold plastic, as they do not provide long-lasting retro-reflectivity in road service conditions.

Pigments
Titanium dioxide (rutile) is commonly used as a pigment. However, care must be taken to avoid moisture, which can cause the Ready-To-Use (RTU) material to thicken, and organic treatment agents, which may lead to yellowing or tackiness of the pigments.

Fillers
Stilacryl® formulations can incorporate commercially available fire-dried fillers such as quartz powder, dolomite, feldspar, calcined flint or quartz (cristobalite), calcite, and heavy spar. Fine fillers with large surface areas, high oil absorption, or hydrophobic properties are not recommended. Depending on the formulation, intermix glass beads ranging from 0.05 to 0.8 mm in size may be used to control the rheology of the mixture.



STİLACRYL® based markings must be applied to dry, clean, mechanically intact road surfaces that are free of oil. Markings are usually applied at surface temperatures of 5 °C /41 °F to 60 °C/140 °F. Application at temperatures as low as –10 °C/14 °F is feasible with additional accelerator.



TEKNO GLASS / **REFLECTRA®** glass beads are a brand of Stil Group. www.technoglass.com.tr

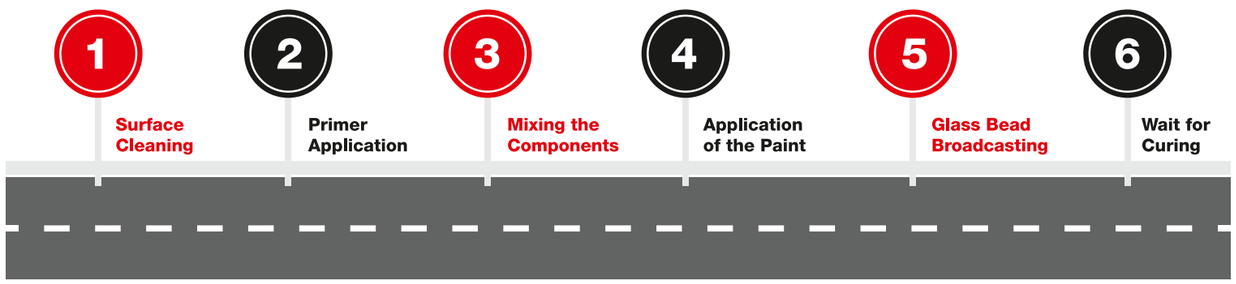
COLD PLASTIC SYSTEMS

ROAD MARKINGS
FOR SAFE DRIVING

2K PROFILED ROAD MARKING PAINT

SITLACRYL® 2K Profiled Road Marking Paint offers a raised profile on road surfaces, improving visibility and tactile feedback for drivers. Combined with MMA resin, this paint system is particularly effective for applications where enhanced night-time and adverse weather visibility are crucial, ensuring that road markings remain highly reflective and durable over time.
The warning sound generated by the profile structure boosts driver attention when crossing the marking. Stilacryl® profile road markings retain their original shape despite high out door temperatures and heavy truck traffic, ensuring that the raised elements remain visible even in rainy conditions. Profiled road marking paint with MMA resin is widely used for enhancing road safety in various high-risk areas. Its raised profile provides both tactile and audible feedback to drivers, making it ideal for highways, high-speed roads, and dangerous curves. The paint is also commonly applied at pedestrian crosswalks, intersections and wet-night visibility zones, ensuring clear visibility in all conditions. The raised surface helps water drain off during rain, keeping reflective glass beads visible to headlights, thus improving nighttime driving safety.
The paint's MMA resin composition ensures fast curing and extreme durability, making it resistant to wear, UV rays, and harsh weather conditions. It also incorporates reflective glass beads for improved visibility and offers high skid resistance, which is crucial for preventing accidents on slippery roads. This makes profiled road marking paint suitable for high-traffic areas like truck lanes, industrial zones, and parking lots, providing long-lasting performance and enhanced road safety.





After surface cleaning, roughen if needed for better adhesion. Apply primer if necessary. Mix the base material with the hardener in the correct ratio. Apply the paint manually or with equipment. Broadcast glass beads immediately after application. Allow time for curing. HOW TO USE?

STILACRYL® MMA
High Durability. High Visibility

ROAD MARKING MMA RESIN

Stil GROUP
ROAD SAFETY & ROAD MARKING

HIGH VISIBILITY

BRIGHT AND DURABLE LINES
FOR ADVERSE WEATHER CONDITIONS

2K SCREED ROAD MARKING PAINT

2K Cold Screed Road Marking Paint is a high-performance solution designed to provide durable and visible road markings. This paint is composed of a two-component system: a base and a hardener. When mixed, this system forms a resilient, long-lasting coating that can withstand heavy traffic, harsh weather conditions, and UV exposure. STILACRYL® MMA resin enhances the properties of this paint, offering excellent adhesion to various surfaces and rapid curing times. The combination results in a robust finish that maintains its visibility and effectiveness over time. The paint is designed to be applied in a thick layer, which ensures high durability and resistance to wear and tear. Ideal for use on highways, urban roads, and parking areas, the 2K Cold Screed Road Marking Paint is also noted for its high friction surface, which improves vehicle traction and safety, especially in wet conditions. Its quick curing allows for efficient application with minimal downtime, making it suitable for both new installations and maintenance projects. The formulation ensures consistent performance and reliability, making it an excellent choice for high-traffic areas. In addition to its robust physical properties, the paint's formulation offers flexibility in application techniques, accommodating various project sizes and types. Whether used for new road construction or the refurbishment of existing markings, it adheres well to different road surfaces and adapts to diverse environmental conditions. This versatility, combined with its long-lasting results, makes the 2K Cold Screed Road Marking Paint a versatile and reliable choice for maintaining road safety and enhancing visibility across different settings.

For the best results, please follow the usage instructions provided at the end of **page 9** carefully. Adhering to these guidelines will ensure optimal performance and durability of the product.

DURABLE APPLICATIONS

STILACRY® 98:2 MMA
FOR A SAFER LIFE JOURNEY

2K STRUCTURED ROAD MARKING PAINT

2K Structured Road Marking Paint is a high-performance, two-component system designed to provide durable and highly visible road markings. This paint consists of a base and a hardener that, when mixed, forms a resilient coating capable of with standing heavy traffic, harsh weather conditions, and UV exposure. Designed to create a raised profile, this structural road marking paint enhances visibility, especially under low-light and rainy conditions, making the markings more noticeable and effective for drivers. STILACRYL® MMA resin plays a crucial role in enhancing the properties of the 2K Structured Road Marking Paint. The MMA (Methyl Methacrylate) resin offers rapid curing, excellent adhesion, and long-lasting durability. STILACRYL® ensures that the paint adheres well to various surfaces such as asphalt and concrete, providing flexibility and robustness. Its fast curing time minimizes road closure periods, allowing for quick reopening to traffic. The combination of STILACRYL® resin with the 2K paint provides an effective solution for modern traffic needs. The applications of 2K Structured Road Marking Paint are extensive, including use on highways, intersections, pedestrian crossings, and roundabouts. This paint is particularly useful in areas where visibility is critical, such as low-light or frequently rainy conditions. The structured profile of the markings helps to improve water drainage and maintain the visibility of reflective glass beads embedded in the paint. This feature enhances night-time visibility and overall road safety. The structured design of the paint provides tactile and auditory feedback when vehicles drive over it, helping to prevent accidents.

For the best results, please follow the usage instructions provided at the end of **page 9** carefully. Adhering to these guidelines will ensure optimal performance and durability of the product.

"Stay Within the Lines
Your Safety, Our Priority"

MMA
RESIN

ROAD
MARKING
& INDUSTRIAL

STİL CHEMİCAL KİMYASAL ÜRÜNLER SANAYİ VE TİCARET LİMİTED ŞİRKETİ

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