MANTA



PRODUCT BROCHURE

Waterproof Coatings

Silicone roof coating · SMP-type coating · Two-component coating
for roofs, walls, basements, wet rooms and infrastructure

Advanced Silicone Science, Infinite Application.

Nanjing Manta New Material Co., Ltd.

ABOUT THE RANGE

Liquid-applied waterproofing for roofs and structures

Manta supplies liquid-applied waterproofing coatings: HS140, a one-component high-solids silicone roof coating; MS2024, a one-component coating based on silane-modified polymer of the SMP type; and HP-2K, a two-component reactive system.

Applied by spray, roller, brush or squeegee, the coatings cure at ambient temperature to a seamless, elastic membrane. They are used on new and existing roofs, floors, walls and basements, on bridges and tunnels, and on metal roofs and tanks.

This brochure gives the key properties of each coating and the general application procedure. Full specifications are in the technical data sheet (TDS) of each grade.



From liquid to membrane

01 Apply

The coating is applied to a clean, sound substrate by spray, roller, brush or squeegee, usually in two crossing coats.

02 Cure

HS140 and MS2024 cure with moisture from the air. HP-2K cures by the reaction of its two parts after mixing.

03 Protect

The cured coating forms a seamless, elastic membrane that keeps out water, follows substrate movement and resists UV and weathering.

The coatings

Manta HS140

Silicone Roof Coating

One-component, moisture-curing silicone coating with a white cool-roof finish, in three viscosity types.

Manta MS2024

SMP-Type Coating

One-component, solvent-free coating based on silane-modified (SMP type) polymer.

Manta HP-2K

Two-Component Coating

Two-part reactive system for roofs, basements and wet rooms, also on damp substrates.

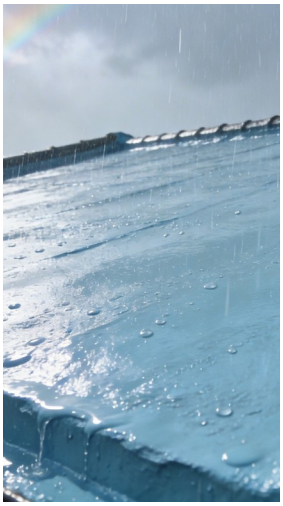


Coated roof deck with walkway marking

BENEFITS

What the coatings do for a roof or structure

Liquid-applied membranes follow every shape of the substrate and leave no laps or seams. The main properties of the range:



01

Seamless waterproofing

The coatings cure to a continuous membrane without joints; HP-2K forms a continuous watertight barrier.



02

Cool-roof reflectance

White HS140 has a solar reflectivity of 0.8 ± 0.1 and an initial SRI of 95 ± 5, which reduces heat gain and cooling costs of the building.



03

Elastic and flexible

Elongation at break of ≥ 120% to ≥ 400% for HS140 (by type), ≥ 200% for MS2024 and up to 700% for HP-2K lets the membrane follow substrate movement.



04

Weather and temperature resistance

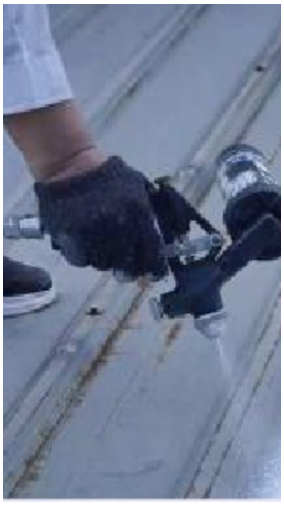
HS140 withstands -40 °C to +200 °C and MS2024 stays flexible from -60 °C to +120 °C. Both resist UV radiation, ozone and salt spray.



05

Adhesion to many substrates

HS140 and MS2024 bond to concrete, metal, wood, ceramics and glass; HP-2K to concrete, metals, PVC, existing coatings and bituminous membranes.



06

Simple application

Applied by airless spray, roller, brush or squeegee and cured at ambient temperature. MS2024 is self-leveling; HP-2K can be applied to damp substrates.

PRODUCT OVERVIEW

The coatings at a glance

Typical properties as given in the TDS of each grade (– = not stated). HS140 is made in three viscosity types; see page 6 for the full table.

Property	Manta HS140	Manta MS2024	Manta HP-2K
Product	High-solids silicone waterproofing roof coating	SMP-type waterproofing coating	Two-component waterproofing coating
System	One-component, moisture-curing	One-component, moisture-curing	Two-part (A/B), mixed 4:1 by weight
Color	Black, white, grey, etc.	Black, white, gray, blue	–
Surface Drying / Tack-Free Time	30–45 min at 25 °C (Type II: 15–45, Type III: 30–40)	approx. 20–30 min at 23 ± 2 °C, 50% RH	< 4 hours at 25 °C; through-cure < 24 hours
Hardness, Shore A	30–45 (Type III: 30–40)	30 ± 5	–
Tensile Strength	≥ 1.2 / ≥ 1.5 / ≥ 1.7 MPa (Type I / II / III)	≥ 1.5 MPa	up to 3.4 MPa
Elongation at Break	≥ 150% / ≥ 120% / ≥ 400% (Type I / II / III)	≥ 200%	up to 700%
VOC	≤ 5%	VOC-free	–
Solids	High solids	Solvent-free	Part A approx. 80.5%, Part B approx. 56.1%
Service Temperature	-40 °C to +200 °C	-60 °C to +120 °C	–
Solar Reflectivity / SRI	0.8 ± 0.1 / 95 ± 5	Light colors reflect solar heat	–
Substrate	Clean, dry and sound, ≥ 3 °C above dew point; not on bituminous membranes	Clean, dry and sound, ≥ 3 °C above dew point; not on bituminous membranes	Sound and clean; can be damp
Packaging	5 kg and 20 kg pails, 190 kg drums	5 kg and 25 kg pails	Part A 20 kg + Part B 5 kg
Shelf Life	12 months	12 months	12 months
Page in this brochure	6	7	8



Commercial flat roofs



Spray application on a roof deck

SELECTION GUIDE

Which coating for which application

Typical starting points from the TDS of each grade. Suitability depends on the substrate and site conditions; please test adhesion on the actual substrate before use.

Application	Grades	Notes
Flat roofs, new and existing	**HS140, MS2024, HP-2K**	White HS140 and light-colored MS2024 also reflect solar heat
Metal roofs, corrugated steel roofs and storage tanks	**HS140, MS2024**	Waterproofing with anti-corrosion and UV protection
Exterior walls and facades	**HS140, MS2024**	Waterproofing and repair
Basements and foundations	**HP-2K, HS140, MS2024**	HP-2K for positive- and negative-side waterproofing, also on damp substrates
Kitchens, bathrooms and swimming pools	**HP-2K, HS140, MS2024**	HP-2K for wet rooms; HS140 and MS2024 for repairs
Retaining walls and cellars	**HP-2K**	Interior negative-side waterproofing
Bridges, highways, subways and tunnels	**HS140, MS2024, HP-2K**	HP-2K for tunnels
Libraries, archives, technical rooms and historical buildings	**HS140, MS2024**	MS2024 is solvent-free
Terraces, aluminum balconies and window awnings	**HP-2K, HS140, MS2024**	HP-2K for terraces; HS140 and MS2024 for balconies and awnings
Warehouses and water tanks	**HS140, MS2024**	External waterproofing and protection
Bonding decorative wall panels	**HS140, MS2024**	As an adhesive for permanent decorative wall panels



Flat roof restoration



Roof edges and eaves

Silicone Roof Coating



Manta HS140

High-solids silicone waterproofing roof coating

Manta HS140 is a one-component, moisture-curing silicone waterproofing coating with ≤5% VOC, offered in self-leveling, medium-viscosity and non-sag grades. The cured elastomer has Shore A hardness 30–45, elongation ≥120% to ≥400% by grade and solar reflectivity 0.8, and withstands -40 to 200 °C. Used for waterproofing and heat reflection on roofs, floors, walls, bridges and tunnels, and on metal roofs, tanks, basements and pools.

Surface Drying, min (Type I / II / III)	**30–45 / 15–45 / 30–40**	VOC	**≤ 5%**
Solar Reflectivity	**0.8 ± 0.1**	Initial SRI	**95 ± 5**

Features

- Silicone-based, high-solids elastomeric coating with low VOC
- Bright white finish with high solar reflectivity for cool roofs
- Elongation, peel adhesion and tensile strength to accommodate structural movement
- Resists UV, salt spray and ozone; withstands -40 °C to +200 °C
- Airless spray, heavy-duty roller or brush; colors on request

Applications

- Waterproofing and heat reflection on new and existing roofs, concrete floors and exterior walls
- Bridges, highways, subways and tunnels; warehouses and water tanks
- Corrugated steel roofs and storage tanks: anti-corrosion and thermal shielding
- Repair of basements, bathrooms, swimming pools and facades; aluminum balconies and window awnings
- Libraries, archives, technical rooms and historical buildings; adhesive for decorative wall panels

Typical properties of the three types

Type I: low viscosity, self-leveling · Type II: medium viscosity · Type III: thixotropic, non-sag

Property	Type I	Type II	Type III	Test method
Appearance	Uniform and delicate paste, without bubbles, impurities, crust, lumps, gel, or precipitates that are difficult to disperse			GB/T 14683-2017(6.2)
Color	Black, white, grey, etc			ISO 4660:2011
Surface Drying Time, 25 °C (min)	30–45	15–45	30–40	GB/T 13477.5-2002
Viscosity (mPa·s)	4000–7000	12000 ± 1000	–	GB/T 2794-2022(7.1)
Curing Speed, 25 °C (mm/24 h)	≥ 2.5	≥ 2.2	≥ 2.5	GB/T 29595-2013(5.8)
Density (g/ml)	1.20 ± 0.05	1.1 ± 0.1	1.4 ± 0.05	GB/T 13477.2-2018
Hardness (Shore A)	30–45	30–45	30–40	GB/T 531.1-2008
Tensile Strength (MPa)	≥ 1.2	≥ 1.5	≥ 1.7	GB/T 528-2009 Dumbbell type I sample
Tear Strength (N/mm)	≥ 3.5	≥ 3.5	≥ 4.0	GB/T 529-2008
Elongation at Break (%)	≥ 150	≥ 120	≥ 400	GB/T 528-2009 Dumbbell type I sample
VOC (%)		≤ 5		GB/T 33372-2020
Volume Shrinkage (%)		≤ 5		GB/T 13477.19-2017
Solar Reflectivity		0.8 ± 0.1		JG/T 235-2014(6.4)
Solar Reflectance after Accelerated Aging (5000 h)		≥ 0.75		JG/T 235-2014(6.7)
Initial Thermal Emissivity		0.90 ± 0.05		JG/T 235-2014(appendix C)
Initial SRI Value		95 ± 5		ASTM E1980-11(2019)
Water Vapour Transmission (g/(m²·d))		≤ 25.0		ASTM E96/E96M-16 (desiccant method)
Peel Adhesion (N/mm): polyurethane foam, acrylic coating, galvanized metal, EPDM, PVC		≥ 2.0		ASTM D903-98(2017)
Low-Temperature Flexibility, -50 °C, 6 mm round bar	No cracking, delamination, or bonding damage			GB/T 16777-2008(13)

SMP-Type Coating



Manta MS2024

SMP-type waterproofing coating

Manta MS2024 is a liquid waterproofing membrane based on silane-modified polymer (SMP) and nano calcium carbonate, which cures with ambient moisture to an elastic, rubber-like barrier. It is tack-free in about 20–30 minutes and gives Shore A 30 ± 5, tensile strength ≥1.5 MPa and elongation ≥200%, with flexibility from -60 to 120 °C, and is VOC-free. Used on roofs, floors, basements, walls, bridges, tunnels, metal roofing and tanks.

Density 25 °C, g/cm³	**1.370–1.390**	Tack-Free Time 23 ± 2 °C, 50% RH	**approx. 20–30 min**
Hardness, Shore A	**30 ± 5**	Tensile Strength	**≥ 1.5 MPa**
Elongation at Break	**≥ 200%**	VOC	**VOC-free**

Features

- VOC-free, solvent-free, compliant with EU environmental standards
- Self-leveling with good penetration; rapid, neutral moisture cure
- Uniform elastic membrane with elongation, tensile strength, tear resistance and peel adhesion
- Flexible from -60 °C to +120 °C; resists prolonged UV radiation, ozone and salt spray
- Bonds to most building substrates (not bituminous membranes); test adhesion on the actual substrate before use

Applications

- Roofs, exposed floors, basements, exterior walls, warehouses and water tanks; light colors reflect solar heat
- Bridges, subways, tunnels and highways
- Archives, libraries, technical rooms and heritage sites
- Aluminum balconies, window awnings, corrugated metal roofing and storage tanks
- Repairs on external surfaces, basements, bathrooms and swimming pools; adhesive for decorative wall panels



Coating a parapet wall — MS2024



Detailing an inside corner — MS2024

Two-Component Coating



Manta HP-2K

Two-component waterproofing coating

Manta HP-2K is a two-part (A/B) reactive liquid waterproofing system mixed at 4:1 by weight that cures at ambient temperature, tack-free in under 4 h and through-cured in under 24 h. It can be applied to damp substrates and reaches elongation up to 700% and tensile strength up to 3.4 MPa, for positive- and negative-side waterproofing. Used on flat roofs and terraces, basements and foundations, kitchens and bathrooms, cellars and tunnels.

Mixing Ratio A:B	**4:1 by weight**	Solid Content	**A approx. 80.5% / B approx. 56.1%**
Tack-Free Time	**< 4 hours at 25 °C**	Through-Cure Time	**< 24 hours**
Elongation	**up to 700%**	Tensile Strength	**up to 3.4 MPa**

Features

- Can be applied directly to damp substrates
- Elongation up to 700% and tensile strength up to 3.4 MPa
- Avoids the moisture sensitivity of the isocyanate component in polyurethane systems
- High solid content for a continuous watertight barrier
- Resists UV and weathering; viscosity can be adjusted with DBE

Applications

- Flat roofs and terraces
- Basements and foundations, positive and negative side
- Wet rooms: kitchens and bathrooms
- Interior negative-side waterproofing of retaining walls and cellars
- Tunnels; bonds to concrete, metals, PVC, existing coatings and bituminous membranes



Flat roofs and terraces — HP-2K



Wet areas — HP-2K

APPLICATION

From substrate preparation to the finished membrane

General procedure for roof waterproofing and restoration. The TDS of each grade applies; test adhesion of the coating to the substrate and to the reinforcing fabric before starting.



1 Clean

Sweep off debris, standing water and dirt. The substrate must be sound, clean and dry (HP-2K: damp allowed), free of laitance, oil and dust.



2 Grind and blow

Remove loose and friable material with an angle grinder or wire brush down to a sound substrate, then blow off the dust.



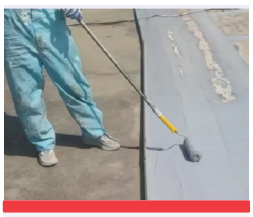
3 Seal cracks

Fill larger cracks and joints with a compatible sealant, with a backer rod in wide joints, leaving no voids.



4 Reinforce details

At edges, parapets, corners and small cracks, embed non-woven fabric in a wet base coat and cover it with a top coat.



5 Coat and check

Apply two crossing coats; the second once the first has cured. Repair missed areas, pinholes and blisters.

Application data by grade

Grade	Application	Second coat	Substrate and cracks
HS140	Two intersecting coats (cross-hatch) by airless spray, roller or squeegee; total dry film thickness ≥ 1.0 mm	Only after the first coat has fully cured	Clean, dry and sound, no standing water or condensation, ≥ 3 °C above dew point. Fill cracks ≥ 3 mm with silicone sealant. Not for bituminous membranes or permanent ponding water
MS2024	At least two coats, max. 1.5 gallons per 100 ft² (approx. 6.11 L per 10 m²) per coat	Perpendicular to the first coat, once the first coat is walkable	Clean, dry and sound, no standing water or condensation, ≥ 3 °C above dew point. Not for bituminous membranes or permanent ponding water
HP-2K	Mix Part A and Part B thoroughly (4:1 by weight) and apply at once, within the pot life	–	Sound and clean, free of dust, grease and oil; remove friable parts and laitance. Damp substrates allowed

Do not apply in rain, and protect fresh coating from rain until it has cured. Do not pour unused coating back into the original container; close part-used containers tightly.



Finished roof membrane



Brush application at details

HANDLING AND STORAGE

Packaging, shelf life and storage

As stated in the TDS of each grade, in the original, unopened containers. Other pack sizes and colors on request.

Grade	Packaging	Shelf life	Storage
HS140	5 kg (5 L / 1 gal) and 20 kg (20 L / 5 gal) plastic pails, 190 kg (190 L) metal drums	12 months	Cool, dry, ventilated; below 27 °C
MS2024	5 kg and 25 kg plastic pails	12 months	Cool, dry, ventilated; below 27 °C; away from sunlight, moisture and ignition sources
HP-2K	Part A: 20 kg pail; Part B: 5 kg pail	12 months	Cool, dry place; 8–35 °C

Handling notes

- HS140 and MS2024 cure with moisture: keep containers tightly closed and close part-used containers at once
- HP-2K: mix Part A and Part B thoroughly and use the mix within its pot life
- HS140 and MS2024 are transported as non-hazardous goods; protect from direct sunlight, rain, impact and crushing
- HS140 and MS2024 past their shelf life may still be used if they pass standard quality testing
- Avoid contact with eyes and skin; after eye contact rinse at once with plenty of clean water and seek medical advice
- Keep out of reach of children; read the TDS of each grade before use



Dry, ventilated warehouse storage



Metal drum (HS140: 190 kg)

SUPPLY AND SERVICE

Supply and support

Packaging

- Plastic pails: 5 kg and 20 kg (HS140), 5 kg and 25 kg (MS2024)
- Metal drums: 190 kg (HS140)
- Two-component sets: Part A 20 kg + Part B 5 kg (HP-2K)
- Other pack sizes on request; samples for evaluation

Quality and documents

- ISO 9001:2015 certified quality management system
- Technical data sheet (TDS) for each grade; other documents on request

Colors and custom grades

- HS140 in black, white, grey and other colors; MS2024 in black, white, gray and blue
- Custom colors and viscosities subject to technical review

Technical support

- Help with grade selection for the substrate and exposure
- Advice on substrate preparation, crack repair and application







To select a coating, please tell us

1. Substrate: concrete, metal, membrane, tiles
2. Substrate condition: dry or damp
3. Roof or structure type and area
4. Exposure: UV, ponding water, temperature
5. Color and application method
6. Quantity and packaging

The information in this brochure is given in good faith and based on our current knowledge. Values are typical unless stated as specifications and do not form part of a sales specification. Users should test the products to determine their suitability for the intended use. The latest TDS of each grade applies.

MANTA



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