
MC-IT-01 (blue) -02 (green)

over-temperature warning heat-indicating paint

Product description

MC-HT-1 / MC-HT-2 is a two-component coating based on high temperature resistant resin, temperature-indicating pigments and fillers. Suitable for over temperature warning of high temperature equipments in petroleum chemical industry. Also can be used to measure the temperature and temperature distribution for complex or operating components in which the temperature is difficult to measure with normal temperature measuring equipments.

Recommended use

Suitable for use on high temperature equipments in petroleum chemical industry. MC-HT-1 / MC-HT-2 are coated on the surface of equipment. If the insulation layer inside the equipment is damaged and local temperature on equipment surface exceeds the setting temperature, the color of the coating changes obviously which warns the operators to take emergency measures to prevent the accident due to over temperature.

Recommended film thickness and spreading rate

Film thickness, dry(μm)	50~100
Film thickness, wet(μm)	125~250
Theoretical spreading rate, m^2/l	8 4

Basic characteristics

Color	MC-IT-01 (blue) /MC-IT-02 (green)
Volume Solids, %	40 \pm 2
Flash Point, $^{\circ}\text{C}$	29 \pm 2
Density (mix), g/ml	1.2 \pm 0.2
VOC, g/l	510 \pm 10
Gloss	glossy
Temperature resistance	Good
Chemical resistance	Good
Discoloration	The color gradually becomes shallow, finally turns into white

Surface preparation

New equipment surface:

using abrasives suitable to achieve min. Sa 2 $\frac{1}{2}$ and roughness of 50-70 μm . After surface treatment, one coat of primer is applied to avoid the formation of rust. The recommended primer is inorganic zinc silicate primer or silicone high-temperature paint. The prepared surface can also directly be coated with over-temperature warning heat-indicating paint.

When for maintenance, the aged paint, dust, grease and rust shall be removed completely by sand blasting to achieve Sa 2 $\frac{1}{2}$ or use hand or power tool to achieve the St3 level. The prepared surface should be coated as soon as possible.

Coated surfaces:

Clean, dry and undamaged compatible high temperature resistant paint.

Other surfaces:

The paint can be used on other substrates. Please contact our company for more information.

Condition during application

The proceeding coating should be completely dry.

The temperature of the substrate should be at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying.

Application methods

Spray: use airless spray or air spray

Brush: recommended for precoating or small area coating only, multiple coats may be required to achieve the specified film thickness.

Application data

Mixing agitate component A and component B respectively, and then mixed thoroughly

Mixing ratio (weight) A:B=100:1

Pot life (23°C) 6 hours (Reduced at higher temperature)

Thinner/Cleaner MC-EX-1

Recommended airless spray parameters

Usage of thinner 0~15% (weight)

Pressure at nozzle 15 ~20MPa (about 150 ~200kg/cm²) .

Nozzle tip 0.38~0.53 mm.

Spray angle 40~80°

Filter Check to ensure that filters are clean.

Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

Good ventilation (Outdoor exposure or free circulation of air)

Typical film thickness

One coat on top of inert substrate

Substrate temperature, °C	10	25	40
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Surface dry, h	2	1	0.5
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Through dry, h	36	24	12
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Dry to recoat, minimum, h	36	24	12
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The given data must be considered as guidelines only. The actual drying time/ recoat interval may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. .

Typical paint system**Normal environment**

Over-temperature warning heat-in coating paint	80 μm
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Severely corrosive environment

Inorganic zinc primer	60 μm
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Over-temperature warning heat-indicating paint	80 μm
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Other systems may be formulated, depending on specific condition.

Storage

Storage conditions are to keep the containers in a cool, dry, well ventilated space and away from source of heat and ignition.

Containers must be kept tightly closed.

Handling

Handle with care.

Packing size

Component A in an 18 litre container and component B in a 4 litre container, or negotiation.

Health and safety

Before and during use of this product, please observe the precautionary notices displayed on the container. Be careful to avoid inhalation and skin contact of paint. Spillage of paint on the skin should immediately be removed with a suitable cleanser, soap and water. Avoid using organic solvent. Eyes should be well flushed with water and then seek medical attention immediately. The product should be used under well-ventilated condition. If using in stagnant condition and narrow place, forced ventilation must be provided, and applicators should take corresponding measures to strengthen personnel protection.

For detailed information on the health and safety and precautions for use of this product, please consult our company.
