

ECOMET TOP BROWN

These Organic topcoats can be applied over Zinc plating and Zinc/Aluminum flake-based Basecoats. Application techniques can be used as Dip-Spin for mass produced small hardware's, Screws and Conventional spray for larger parts.

| PHYSICAL PROPERTIES | Units | |
|------------------------|------------|--------------|
| Colour | | Brown |
| Theoretical coverage | m2/kg/10 μ | 15 - 20 |
| Viscosity (Zhan Cup 2) | Seconds | 35 - 45 |
| Solids (By Weight) | % | 38 ± 3 |
| Density | Gms/cc | 1.10 +/- 0.1 |
| Flash point | ٥C | >100 |
| COF Values ISO 16047 | μtot | 0.12 - 0.18 |
| Chrome Content | | N.A. |

APPLICATION

| SubstrateAny metal substrate except high copper containing alloys.Surface preparationThe substrate must be dry and free from dust and grease. Acidic/ basic impurities and particularly salts must be avoided.Possible Pre-treatment / BasecoatZinc/Al flake-based Basecoats, Electroplating etc.Application MethodDip / Spin, Dip, Spray etc.Filtration150 mesh stainless steel SieveApplication viscosity25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application.Recommended DFT8-12 μAdditionDM WaterFlash Off5-10 min. at 100-120°C.Curing (metal temp.)25 - 30 min. at 200 - 220 °C | | |
|--|-----------------------|---|
| impurities and particularly salts must be avoided.Possible Pre-treatment / BasecoatZinc/Al flake-based Basecoats, Electroplating etc.Application MethodDip / Spin, Dip, Spray etc.Filtration150 mesh stainless steel SieveApplication viscosity25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application.Recommended DFT8-12 μAdditionDM WaterAddition of DM Water5 - 10 % by weightFlash Off5-10 min. at 100-120°C. | Substrate | Any metal substrate except high copper containing alloys. |
| BasecoatDip / Spin, Dip, Spray etc.Filtration150 mesh stainless steel SieveApplication viscosity25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application.Recommended DFT8-12 μAdditionDM WaterAddition of DM Water5 - 10 % by weightFlash Off5-10 min. at 100-120°C. | Surface preparation | The substrate must be dry and free from dust and grease. Acidic/ basic impurities and particularly salts must be avoided. |
| Filtration 150 mesh stainless steel Sieve Application viscosity 25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application. Recommended DFT 8-12 μ Addition DM Water Addition of DM Water 5 - 10 % by weight Flash Off 5-10 min. at 100-120°C. | | Zinc/Al flake-based Basecoats, Electroplating etc. |
| Application viscosity25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application.Recommended DFT8-12 μAdditionDM WaterAddition of DM Water5 - 10 % by weightFlash Off5-10 min. at 100-120°C. | Application Method | Dip / Spin, Dip, Spray etc. |
| Recommended DFT 8-12 μ Addition DM Water Addition of DM Water 5 - 10 % by weight Flash Off 5-10 min. at 100-120°C. | Filtration | 150 mesh stainless steel Sieve |
| Addition DM Water Addition of DM Water 5 - 10 % by weight Flash Off 5-10 min. at 100-120°C. | Application viscosity | 25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application. |
| Addition of DM Water 5 - 10 % by weight Flash Off 5-10 min. at 100-120°C. | Recommended DFT | 8-12 μ |
| Flash Off 5-10 min. at 100-120°C. | Addition | DM Water |
| | Addition of DM Water | 5 - 10 % by weight |
| Curing (metal temp.) 25 - 30 min. at 200 - 220 °C | Flash Off | 5-10 min. at 100-120°C. |
| | Curing (metal temp.) | 25 - 30 min. at 200 - 220 °C |

- Physical constants are averages and are not to be used as product specifications. They may vary up to 5 % of the values shown are - specifications representative for the process capability.

- Storage life is 12 months at 20-25°C. For more information on health & safety refer Material safety data sheet for handling and applying





ECOMET TOP BROWN Coating Test

Recommended Base Coat:

- Acid Zinc Plating
- Alkaline Zinc Plating
- ECOMET Corundum
- ECOMET 500

PHYSICAL TESTS OF LIQUID PAINT

| # | Name of test | Procedure | Results | Comment |
|----|---------------|------------------|-----------------|---------|
| 1. | Viscosity | By Zhan Cup no 2 | 35 - 45 seconds | |
| 2. | Solid Content | By weight | 38 % +/- 3 | |
| 3. | рН | pH meter | 8 - 9 | |

AFTER APPLICATION ON SUBSTRATE: PHYSICAL TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|-------------------------|-------------|--------------|--------------------|
| 1. | Coating Layer Thickness | | 6 - 8 Micron | By Thickness gauge |
| 2. | Adhesion | ISO-10683 | Pass | 7Nm/12mm2 |
| 3. | Hardness of Film | Pencil Test | > 4 H | |

AFTER APPLICATION ON SUBSTRATE: CHEMICAL TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|-------------------------------|-----------|-------------------|---------|
| 1. | Automotive Oil and Fuel Tests | Dip | Pass | |
| 2. | Acid test – 2PH | Dip | Pass (30 Seconds) | |

AFTER APPLICATION ON SUBSTRATE: PERFORMANCE TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|--------------|-----------|-------------------|------------------------|
| 1. | SST | ASTM B117 | 500 Hours | Additional to basecoat |
| 2. | COF Test | ISO16047 | 0.15 +/- 0.03 tot | Others on request |

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ECOMET TOP COPPER

These Organic topcoats can be applied over Zinc plating and Zinc/Aluminium flake-based Basecoats. Application techniques can be used as Dip-Spin for mass produced small hardware's, Screws and Conventional spray for larger parts.

| PHYSICAL PROPERTIES | Units | |
|------------------------|------------|--------------|
| Colour | | Copper |
| Theoretical coverage | m2/kg/10 μ | 15 - 20 |
| Viscosity (Zhan Cup 2) | Seconds | 40 - 50 |
| Solids (By Weight) | % | 40 ± 3 |
| Density | Gms/cc | 1.10 +/- 0.1 |
| Flash point | ٥C | >100 |
| COF Values ISO 16047 | μtot | 0.12 - 0.18 |
| Chrome Content | | N.A. |

APPLICATION

| Substrate | Any metal substrate except high copper containing alloys. |
|--------------------------------------|---|
| Surface preparation | The substrate must be dry and free from dust and grease. Acidic/ basic impurities and particularly salts must be avoided. |
| Possible Pre-treatment / Basecoat | Zinc/Al flake-based Basecoats, Electroplating etc. |
| Application Method | Dip / Spin, Dip, Spray etc. |
| Filtration | 150 mesh stainless steel Sieve |
| Application viscosity | 25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application. |
| Recommended DFT | 8-12 μ |
| Addition | DM Water |
| Addition of DM Water | 5 - 10 % by weight |
| Flash Off | 5-10 min. at 100-120°C. |
| Curing (metal temp.) | 25 - 30 min. at 200 - 220 °C . |

- Physical constants are averages and are not to be used as product specifications. They may vary up to 5 % of the values shown are specifications representative for the process capability.

- Storage life is 12 months at 20-25°C. For more information on health & safety refer Material safety data sheet for handling and applying.





ECOMET TOP COPPER Coating Test

Recommended Base Coat:

- Acid Zinc Plating
- Alkaline Zinc Plating
- ECOMET Corundum
- ECOMET 500

PHYSICAL TESTS OF LIQUID PAINT

| # | Name of test | Procedure | Results | Comment |
|----|---------------|------------------|-----------------|---------|
| 1. | Viscosity | By zhan cup no 2 | 40 - 50 seconds | |
| 2. | Solid Content | By weight | 40 +/- 3 % | |
| 3. | рН | pH meter | 8 - 9 | |

AFTER APPLICATION ON SUBSTRATE: PHYSICAL TESTS

| # | Name of test | Procedure | Results | Comment |
|----|-------------------------|-------------|--------------|--------------------|
| 1. | Coating Layer Thickness | | 6 - 8 Micron | By Thickness gauge |
| 2. | Adhesion | ISO-10683 | Pass | 7Nm/12mm2 |
| 3. | Hardness of Film | Pencil Test | > 4 H | |

AFTER APPLICATION ON SUBSTRATE: CHEMICAL TESTS

| # | Name of test | Procedure | Results | Comment |
|----|-------------------------------|-----------|---------|---------|
| 1. | Automotive Oil and Fuel Tests | Dip | Pass | |

AFTER APPLICATION ON SUBSTRATE: PERFORMANCE TESTS

| # | Name of test | Procedure | Results | Comment |
|----|--------------|-----------|-------------------|-------------------------|
| 1. | SST | ASTM B117 | 500 Hours | Additional to base coat |
| 2. | COF Test | ISO16047 | 0.15 +/- 0.03 tot | Others on request |

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ECOMET TOP GREEN

These Organic topcoats can be applied over Zinc plating and Zinc/Aluminium flake-based Basecoats. Application techniques can be used as Dip-Spin for mass produced small hardware's, Screws and Conventional spray for larger parts.

| PHYSICAL PROPERTIES | Units | |
|------------------------|------------|--------------|
| Colour | | Green |
| Theoretical coverage | m2/kg/10 μ | 15 - 20 |
| Viscosity (Zhan Cup 2) | Seconds | 40 - 50 |
| Solids (By Weight) | % | 33 ± 3 |
| Density | Gms/cc | 1.10 +/- 0.1 |
| Flash point | ٥C | >100 |
| COF Values ISO 16047 | μtot | 0.12 - 0.18 |
| Chrome Content | | N.A. |

APPLICATION

| Substrate | Any metal substrate except high copper containing alloys. |
|--------------------------------------|---|
| Surface preparation | The substrate must be dry and free from dust and grease. Acidic/ basic impurities and particularly salts must be avoided. |
| Possible Pre-treatment / Basecoat | Zinc/Al flake-based Basecoats, Electroplating etc. |
| Application Method | Dip / Spin, Dip, Spray etc. |
| Filtration | 150 mesh stainless steel sieve |
| Application viscosity | 25 - 30 sec. on Zhan cup 2 for Dip-spin & 18 - 20 for Spray application. |
| Recommended DFT | 8-12 μ |
| Addition | DM Water |
| Addition of DM Water | 5 - 10 % by weight |
| Flash Off | 5-10 min. at 100-120°C. |
| Curing (metal temp.) | 25 - 30 min. at 200 - 220 °C |

- Physical constants are averages and are not to be used as product specifications. They may vary up to 5 % of the values shown are specifications representative for the process capability.

-Storage life is 12 months at 20-25°C. For more information on health & safety refer Material safety data sheet for handling and applying





ECOMET TOP GREEN Coating Test

Recommended Base Coat:

- Acid Zinc Plating
- Alkaline Zinc Plating
- ECOMET Corundum
- ECOMET 500

PHYSICAL TESTS OF LIQUID PAINT

| # | Name of Test | Procedure | Results | Comment |
|----|---------------|-------------------|-----------------|---------|
| 1. | Viscosity | By Zhan Cup no. 2 | 40 - 50 seconds | |
| 2. | Solid Content | By weight | 33 % +/- 3 | |
| 3. | рН | pH meter | 8 - 9 | |

AFTER APPLICATION ON SUBSTRATE: PHYSICAL TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|-------------------------|-------------|--------------|--------------------|
| 1. | Coating Layer Thickness | | 6 - 8 Micron | By Thickness gauge |
| 2. | Adhesion | ISO-10683 | Pass | 7Nm/12mm2 |
| 3. | Hardness of Film | Pencil Test | > 4 H | |

AFTER APPLICATION ON SUBSTRATE: CHEMICAL TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|-------------------------------|-----------|-------------------|---------|
| 1. | Automotive Oil and Fuel Tests | Dip | Pass | |
| 2. | Acid test – 2PH | Dip | Pass (30 Seconds) | |

AFTER APPLICATION ON SUBSTRATE: PERFORMANCE TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|--------------|-----------|-------------------|------------------------|
| 1. | SST | ASTM B117 | 500 Hours | Additional to Basecoat |
| 2. | COF Test | ISO16047 | 0.15 +/- 0.03 tot | Others on request |

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ECOMET TOP SILVER

These Organic topcoats can be applied over Zinc plating and Zinc/Aluminium flake-based Basecoats. Application techniques can be used as Dip-Spin for mass produced small hardware's and Conventional spray for larger parts.

| PHYSICAL PROPERTIES | Units | | |
|------------------------|--|--------------|--|
| Colour | | Silver Grey | |
| Theoretical coverage | m2/kg/10 μ | 15-20 | |
| Viscosity (Zhan Cup 2) | Seconds | 35-45 | |
| Solids (By Weight) | % | 35 ± 2 | |
| Density | Gms/cc | 1.10 +/- 0.1 | |
| Flash point | ٥C | >100 | |
| COF Values ISO 16047 | μtot | 0.12 - 0.18 | |
| APPLICATION | | | |
| Substrate | Any metal substrate except high copper containing alloys. | | |
| Surface preparation | The substrate must be dry and free from dust and grease. Acidic/ basic impurities and particularly salts must be avoided. | | |
| Possible Pre-treatment | Zinc/Al flake-based Basecoats, Electroplating etc. | | |

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|-----------------------|--|--|--|
| | | | |

| Application Method | Dip / Spin, Dip, Spray etc. | |
|-----------------------|--|--|
| Filtration | 150 mesh stainless steel Sieve | |
| Application viscosity | 25 – 30 sec. on Zhan cup 2 for Dip-spin & 18 – 20 for Spray application. | |
| Recommended DFT | 8-12 µ | |
| Addition | DM Water | |
| Addition of DM Water | 5 - 10 % by weight | |
| Flash Off | 5-10 min. at 100-120°C. | |
| Curing (metal temp.) | 15 - 30 min. at 200 - 220 °C. | |

- Physical constants are averages and are not to be used as product specifications. They may vary up to 5 % of the values shown are specifications representative for the process capability.



⁻Storage life is 12 months at 20-25°C

⁻ For more information on health & safety refer Material safety data sheet for handling and applying.



ECOMET TOP SILVER Coating Test

Recommended Base Coat:

- Acid Zinc Plating
- Alkaline Zinc Plating
- ECOMET Corundum
- ECOMET 500

PHYSICAL TESTS OF LIQUID PAINT

| # | Name of Test | Procedure | Results | Comment |
|----|---------------|------------------|---------------|---------|
| 1. | Viscosity | By zhan cup no 2 | 35-45 seconds | |
| 2. | Solid Content | By weight | 35 +/- 2% | |
| 3. | рН | pH meter | 8-9 | |

AFTER APPLICATION ON SUBSTRATE: PHYSICAL TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|-------------------------|-------------|------------|--------------------|
| 1. | Coating Layer Thickness | | 4-6 Micron | By Thickness gauge |
| 2. | Adhesion | ISO-10683 | Pass | 7Nm/12mm2 |
| 3. | Hardness of Film | Pencil Test | >4 H | |

AFTER APPLICATION ON SUBSTRATE: CHEMICAL TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|-------------------------------|-----------|---------------------|---------|
| 1. | Automotive Oil and Fuel Tests | Dip | Pass | |
| 2. | Acid test – 2PH | Dip | Passes (30 Seconds) | |

AFTER APPLICATION ON SUBSTRATE: PERFORMANCE TESTS

| # | Name of Test | Procedure | Results | Comment |
|----|--------------|-----------|-------------------|-------------------------|
| 1. | SST | ASTM B117 | 500 Hours | Additional to base coat |
| 2. | COF Test | ISO16047 | 0.15 +/- 0.03 tot | Others on request |

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