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C5-H Heavy-Duty Anti-Corrosion Coating System Technical Summary

Statement:

This English document is provided as a technical summary for reference purposes only.

The original Chinese test report issued by the authorized testing institution shall prevail.

1. Product Information

Product Name: C5-H Heavy-Duty Anti-Corrosion Coating System

System Type: Multi-layer Protective Coating System

Typical Applications:

- Energy Storage Containers (ESS/BESS Containers)
- Special Containers
- Containerized Equipment
- Outdoor Electrical Equipment
- Industrial Steel Structures
- Heavy Machinery & Equipment
- Marine & Offshore Facilities
- Power & Energy Infrastructure

2. Reference Standard

The coating system was tested in accordance with relevant international anti-corrosion standards, including:ISO 12944 — Corrosion Protection of Steel Structures by Protective Paint Systems

3. Coating System Description

Layer	Product Type
Primer	Epoxy Zinc-Rich Primer
Intermediate Coat	High-Build Epoxy Coating
Topcoat	Polyurethane Finish

4. Test Items & Results

4.1 Salt Spray Resistance

Test Method: Neutral Salt Spray Test

Result: No blistering, rusting, peeling, or coating failure observed during the test period.

4.2 Adhesion Performance

Result: Excellent adhesion performance with no detachment observed.

4.3 Coating Film Integrity

Result: Coating film remained intact after testing. No cracking, peeling, or significant surface defects observed.

5. Conclusion

The tested coating system meets the performance requirements for C5 high-corrosivity environments and is suitable for long-term corrosion protection in severe service conditions, including:

- Marine atmospheres
- Coastal environments
- Offshore platforms
- Heavy industrial environments

6. Recommended Applications & Protective Solutions

The C5-H anti-corrosion coating system is designed for long-term protection of steel structures and equipment operating in severe corrosive environments.

Typical application fields:

- Energy Storage Containers (ESS/BESS Containers)
- Special Containers
- Containerized Equipment
- Outdoor Electrical Equipment
- Industrial Steel Structures
- Heavy Machinery & Equipment
- Marine & Coastal Facilities
- Power & Energy Infrastructure

System Features:

- Excellent corrosion resistance
- Strong adhesion performance
- Long-term outdoor durability
- Resistance to humidity, salt spray, and industrial atmosphere
- Reliable protection for equipment exposed to complex outdoor environments

7. Recommended Service Environment

This coating system is recommended for equipment and steel structures exposed to:

- Coastal and marine environments
- Offshore atmospheric conditions
- High humidity industrial areas
- Outdoor heavy-duty service environments
- Long-term exposure to UV and corrosive atmosphere

8. Technical Positioning

The C5-H coating system is developed as a heavy-duty protective coating solution for long-term corrosion protection of industrial equipment and outdoor steel structures.

It is particularly suitable for:

- Energy storage systems
- Containerized industrial equipment
- Special-purpose containers
- Outdoor infrastructure projects
- Heavy-duty industrial applications
- The system is designed to support the durability and reliability requirements of modern industrial and energy equipment operating in demanding outdoor conditions.

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中国认可
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检测
TESTING
CNAS L1135

No. TL25120350R1

检 测 报 告

TEST REPORT

样品名称： NAME OF SAMPLE	环氧富锌底漆HY-9002（80μm）+环氧云铁中间漆HY-01 G（140μm）+聚氨酯双组份面漆RA L-7035（60μm）
委托单位： CLIENT	广东广雀涂料有限公司
检测类别： CLASSIFICATION OF TEST	委托检测

化学工业合成材料老化质量监督检验中心

The Quality Supervision and Inspection Center of Synthetic Material Ageing of Chemical Industry

检验检测专用章

注 意 事 项

1. 检测报告未加盖检测单位“检验检测专用章”无效。
2. 复制检测报告未重新加盖检测单位“检验检测专用章”无效。
3. 检测报告无主检、审核、批准人签章无效。
4. 检测报告涂改无效。
5. 对检测报告若有异议，应于收到报告之日起十五日内向检测单位提出，逾期不予受理。
6. 送检委托检测结果，仅对所送样品有效。送样委托检测的样品及相关信息均由委托方提供，本中心不对其真实性及完整性负责。
7. 无CMA标识报告中的数据和结果，以及有CMA标识报告，报告中标明不在本中心资质认定能力范围内的数据和结果，不具有社会证明作用，仅供委托方内部使用。

NOTES

1. The inspection and testing report shall be deemed invalid without the “Official Seal for Inspection and Testing Report” of the inspection and testing agency.
2. A copy of the inspection report shall be deemed invalid unless re-stamped with the “Official Seal for Inspection and Testing Report” of the inspection and testing agency.
3. The inspection and testing report shall be deemed invalid in the absence of the signatures/seals of the Lead Inspector, Reviewer, and Approver.
4. An inspection and testing report shall be deemed invalid if forged or altered.
5. Should there be any objection to the inspection and testing report, a complaint must be filed with the inspection agency within fifteen (15) days upon receipt of the report. Any request thereafter will not be accepted.
6. Results are only valid for the samples as received. The agency is not responsible for the authenticity or completeness of the samples or information provided by the client.
7. Data and results in reports without the CMA mark, as well as those (even in a CMA-marked report) that fall outside the scope of this agency’s accreditation, are not valid for public evidential purposes and are provided solely for the client’s internal use.

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报告真伪查询：二维码查询，手机扫描本报告封面二维码，核对真伪。如需查询完整报告内容，请联系本实验室，查询电话 020-32373900

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TESTING
CNAS L1135

The Quality Supervision and Inspection Center of Synthetic Material Ageing of Chemical Industry

检 测 报 告 Test Report

No. TL25120350R1

样品名称 Name of Sample	环氧富锌底漆HY-9002（80μm）+环氧云铁中间漆HY-01 G（140μm）+聚氨酯双组份面漆R A L-7035（60μm）	样品编号 Sample Number	T25090226
委托单位 Client	广东广雀涂料有限公司	检测类别 Classification of Test	委托检测
生产单位 Manufacturer	广东广雀涂料有限公司	生产批号 Batch Number	----
送样日期 Sampling Date	2025年9月23日	生产日期 Production Date	----
检测日期 Test Date	2025年9月26日～2025年12月5日	型号/商标 Type/Trademark	----/----
样品数量 Sample Numbers	12 块涂料试板	合同编号 Contract Number	T25090226
检测项目 Test Item	见检测项目及结果页	样品描述及说明 Description and Explanation of Sample	客户制板
检测依据 Test Method	ISO 12944-6:2018《色漆和清漆 防腐涂料体系对钢结构防腐蚀保护 第6部分:实验室性能测试方法》		
检测结论 Result	该样品依据委托方要求，按照ISO 12944-6:2018《色漆和清漆 防腐涂料体系对钢结构防腐蚀保护第6部分:实验室性能测试方法》进行检测，所检项目检测结果符合“C5-H”的指标要求。 （检测报告专用章） 签发日期：2025年12月23日		
备注 Remark	----------		

批准：Approved by 审核：Inspected by 主检：Tested by

检测项目及结果Test Items and Results

No. TL25120350R1

序号	检测项目		检测依据	指标值	检测结果			本项结论
1	初始附着力	附着力（拉开法），MPa	ISO 4624：2023	≥2.5 [不允许出现与基材的附着破坏（A/B）（除非拉开强度值大于或等于5MPa）]	5.48	100%B	4.9	符合
					4.04	100%B		
					5.19	100%B		
					5.18	100%B	5.0	
					5.23	100%B		
					4.63	100%B		
					5.93	100%B	4.8	
					4.91	100%B		
					3.63	100%B		
2	凝露试验（720h）	起泡，级	ISO 4628-2：2016	0（S0）	0（S0）			符合
		生锈，级	ISO 4628-3：2016	Ri 0	Ri 0			符合
		开裂，级	ISO 4628-4：2016	0（S0）	0（S0）			符合
		剥落，级	ISO 4628-5：2022	0（S0）	0（S0）			符合
		试验后，附着力（拉开法），MPa	ISO 4624：2023	≥2.5 [不允许出现与基材的附着破坏（A/B）（除非拉开强度值大于或等于5MPa）]	3.58	100%B	3.9	符合
					4.90	100%B		
					3.29	100%B		
					3.12	100%B	3.5	
					3.63	100%B		
					3.78	100%B		
					3.17	100%B	3.4	
					3.71	100%B		
					3.25	100%B		

序号	检测项目		检测依据	指标值	检测结果			本项结论
3	中性盐雾（1440h）	起泡，级	ISO 4628-2：2016	0（S0）	0（S0）			符合
		生锈，级	ISO 4628-3：2016	Ri 0	Ri 0			符合
		开裂，级	ISO 4628-4：2016	0（S0）	0（S0）			符合
		剥落，级	ISO 4628-5：2022	0（S0）	0（S0）			符合
		划线处的腐蚀宽度，mm	ISO 12944-6:2018	M≤1.5	M_1=1.3 M_2=1.4 M_3=1.4.		$\overline{M}$=1.4	符合
		试验后，附着力（拉开法），MPa	ISO 4624：2023	≥2.5 [不允许出现与基材的附着破坏（A/B）（除非拉开强度值大于或等于5MPa）]	3.86	100%B	3.7	符合
					3.79	100%B		
					3.53	100%B		
					3.08	100%B	3.2	
					3.09	100%B		
					3.50	100%B		
					3.59	100%B	3.7	
					3.90	100%B		
					3.52	100%B		

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委托方地址 Client Address	广州市天河区林和中路188号附楼二楼B05
试样制备及说明 Preparation of Sample and Explanation	试样由委托方提供
主要试验设备（或仪器） Major Test Instruments	Ecotest Plus涂层测厚仪(L1101)，BGD875连续冷凝试验仪(L3101)，Q-FOG CCT-600盐雾试验箱(L3080)，数显卡尺(L1263)，PosiTest AT-A附着力测试仪(L1235)
试验环境及状态 Test Environment and Conditions	----------
试验结果不确定度 Uncertainty of Testing Results	----------
分包项目及分包方 Subcontractor and Subcontracting Items	----------
备　注 Remark	本报告替代报告编号为TL25120350的报告，TL25120350报告作废，原报告签发日期：2025年12月18日。修改信息：样品名称由“环氧富锌底漆HY-9002（50μm）+环氧云铁中间漆HY-01 G（160μm）+聚氨酯双组份面漆R A L-7035（50μm）”更改为“环氧富锌底漆HY-9002（80μm）+环氧云铁中间漆HY-01 G（140μm）+聚氨酯双组份面漆R A L-7035（60μm）”。 （1）凝露试验条件：温度：（38±2）℃； （2）中性盐雾试验条件：盐水浓度：（50±5）g/L，温度：（35±2）℃，pH值：6.5～7.2，连续喷雾，80cm^{2}的水平面积的平均沉降率：（1.5±0.5）mL/h。

**********结束**********