

Date of visit: 30 Sep. 2022  
Date of report: 10 Oct. 2022

Participants	:	Moulder	:	Mr. Xu (G.M) Mr. Qi (Project Engineer)
		EMS	:	J. Jin, E. Guo
		OEM	:	Mr. Yan (G.M), Mr. Qi (Project Leader)
OEM	:	Hikvision		
Sales responsible	:	GUOE		
Distributor	:	No		
Location	:	Hangzhou		
Application	:	Anti-corrosion Surveillance Camera		
Segment Code	:	150		
Project number	:	n.a		
Material	:	Grivory XE11119 (Grivory GVX-5H V0)		
USP	:	Comprehensive material performance (UL94 FR & stiffness/strength, Chemical resistance)		
		ADC Technical support		
Potential	:	80 t/a		
SOP	:	12.2022		



- Finalize tooling modification solution for top cover & rear ball parts
- Clarify the new GVX FR development progress

- Hikvision accept & support the tooling modification suggestions provide by EMS
- Hikvision will evaluate competitor material if EMS can't provide new GVX FR grade by end of Nov.2022
- ADC will evaluate the weathering performance ( $\Delta E$  deviation) on Grivory GVX-5H white C19301.5 with UV resistance additives inside as a reference by 30<sup>th</sup>. Nov
- Arrange an internal meeting to define next action regarding the new grade development by 14<sup>th</sup>. Oct

- Hikvision support EMS tooling modification suggestion on top cover and rear ball part for improving black streaks and flatness issue accordingly
  - *Top cover: change sub gates to disc gate for improving the black streak*

- Rear ball: change gate location from side to top for improving flatness as indicated by MFA

- In order to balance the impact performance and flame retardant level, Hikvision agree to conduct the mass production using dry blend material (Grivory XE11119 : Grivory GVX-5H = 1:1) as a temporary solution (8 ton material been delivered with extra 8 ton open order)
- The dry blend solution can fulfil the mechanical performance and V1 flame retardant requirements, however can't fulfil the Xenon lamp testing for 1000 hours (as well as pure XE11119)
- For long-term cooperation, achieving production stability and available UL card, Hikvision request EMS develop a new GVX-5H FR grade @ notched impact >12kJ/m<sup>2</sup>, V1 flame retardant @2.5mm
- Hikvision informed that If EMS can't provide new GVX FR by end of Nov.2022, they will evaluate other material solution
- EMS new GVX FR development is in pending situation due to high  $\Delta E$  requirements (<3), which reject by ECCH R&D ( $\Delta E \sim 10$  is possible indicated by R&D)
- ADC will evaluate the weathering performance ( $\Delta E$  deviation) on Grivory GVX-5H white C19301.5 with UV resistance additives by 30<sup>th</sup>. Nov as per ISO4892-2
- **Part & test requirement**
  - Salt mist resistance (GB/T 2423.18; IEC 60068-2-52) (Corrosion-proof)
  - Corrosion gases resistance (GB/T 2423.51; IEC 60068-2-60) (Corrosion-proof)
  - Impact resistance (GB 3836.1-2010/ IEC 60079-0-2007) (Explosion-proof)

#### 4. Actions

No.	Action	Resp.	Due date
1	Obtain trial result of top & rear ball with tooling modification	JIAJ	Done
2	Initial a TI of Xenon lamp testing internally	GUOE	Done
3	Arrange an internal meeting for next action regarding the new GVX FR grade development	GUOE	14 Oct. 2022

#### 5. Attachments

**Action feedback:** Obtain trial result of top & rear ball with tooling modification

Top cover: disc-gate achieves nearly no black streaks any more

Rear ball: top gate location improve the flatness from 1.5mm to 0.4mm



Best regards,

Jason Jin  
TCS Engineer