



COA No.: TCOA20-0450-01

188, Moonji-ro, Yuseong-gu, Daejeon, 34122, Korea Tel: +82-42-866-4764

11. 2, 2020

Client Name DONG HYUN KIM

Client Company Tech Center. PO, LG Chem, Ltd.

**Application** Requested by Client

Sample Name/Description SL188

Sample Received 10. 27, 2020

**Testing Date** 10. 27, 2020 ~ 11. 2, 2020

**Testing Environment** Temperature :  $(25 \pm 5)$  °C, Humidity :  $(35 \pm 5)$  % R.H.

Reporting Date 11. 2, 2020

**Testing method** Please see the following page(s). **Results** Please see the following page(s).

- 1. The results shown in this report refer only to the sample with which the client provided. The sample name is referred as client assigned.
- 2. This report cannot be duplicated or utilized without prior permission.
- 3. This report can be reissued after approval by technical manager and director of analytical center.

Tested by

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YUJIN HAN / Analyst

Authorized by

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JUNG HYE WON / Vice Technical Manager



This test report is not issued by TÜV SÜD lab and the qualified TÜV SÜD mark means our lab is qualified and registered as TÜV SÜD partner lab program with the specific scope and test standards or methods. This special TÜV SÜD mark is property of TÜV SÜD and valid only with the related valid attestation.





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Unit: mg/kg

Result(s)

Sample Description: SL188

Heavy Metals
Unit: mg/kg

Test Items	Results	MDL	Test Method
Pb	ND	10	
Cd	ND	10	ICP/OES,IEC 62321-5:2013
Cr	ND	10	
Hg	ND	4	TD(G)-AAS, IEC 62321-4:2013

<sup>\*</sup> Cr content includes entire Cr species including Cr<sup>6+</sup>

#### Flame Retardants-PBBs/PBDEs

Test Items	Results	MDL	Test Method
Monobromobiphenyl	ND	20	
Dibromobiphenyl	ND	20	
Tribromobiphenyl	ND	20	
Tetrabromobiphenyl	ND	20	
Pentabromobiphenyl	ND	20	
Hexabromobiphenyl	ND	20	
Heptabromobiphenyl	ND	20	
Octabromobiphenyl	ND	20	GC/MS, IEC62321-6:2015
Nonabromobiphenyl	ND	20	
Decabromobiphenyl	ND	20	
Monobromodiphenyl ether	ND	20	
Dibromodiphenyl ether	ND	20	
Tribromodiphenyl ether	ND	20	
Tetrabromodiphenyl ether	ND	20	
Pentabromodiphenyl ether	ND	20	
Hexabromodiphenyl ether	ND	20	
Heptabromodiphenyl ether	ND	20	
Octabromodiphenyl ether	ND	20	
Nonabromodiphenyl ether	ND	20	
Decabromodiphenyl ether	ND	20	

<sup>\*</sup> ND :Not Detected

<sup>\*</sup> MDL :Method Detection Limit





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Phthalates Unit: mg/kg

Test Items	Results	MDL	Test Method
Dimethyl phthalate	ND	50	GC/MS, IEC 62321-8:2017
Diethyl phthalate	ND	50	(In-House Test Method)
Di-n-butyl phthalate	ND	50	
Di-iso-butyl phthalate	ND	50	
Butyl benzyl phthalate	ND	50	
Di-(2-ethylhexyl)- phthalate	ND	50	GC/MS, IEC 62321-8:2017
Di-n-octyl phthalate	ND	50	,
Di-iso-nonyl phthalate	ND	50	
Di-iso-decyl phthalate	ND	50	

<sup>\*</sup> ND: Not Detected

<sup>\*</sup> MDL: Method Detection Limit



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Picture of Sample as Received:





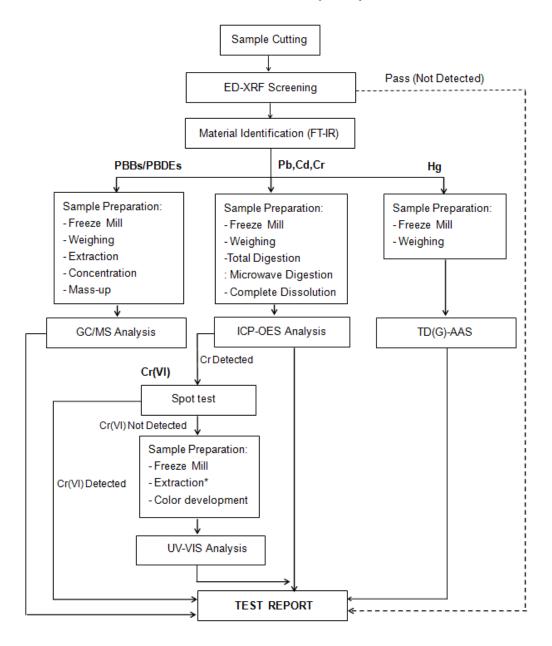


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#### The Test Procedures (RoHS)



- \* (1) For non-metallic material, add alkaline digestion reagent
- (2) For metallic material, add pure water and heat to boiling

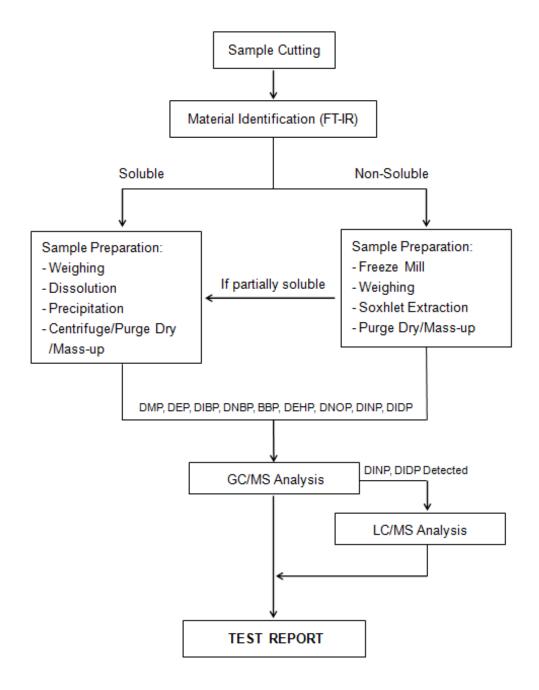


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#### The Test Procedures (Phthalates)



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