

**TEST REPORT**

**Report No:** AR-20-SV-022469-02  
**Customer:** NBH Engineering & Industrial Sdn Bhd  
**Date of Issue:** 14/07/2020



**Batch No:** EUMYBM-00059187  
**Sample No:** 138-2020-06005140

**To:** NBH Engineering & Industrial Sdn Bhd  
NO 6, JALAN MJ 16,  
LAKE 6 INDUSTRIAL PARK,  
47100 PUCHONG  
SELANGOR MALAYSIA

**Attn:** Mr.B H Nyin

**Date Sample Received:** 29/06/2020  
**Date of Testing:** 30/06/2020 to 06/07/2020

**The following sample was identified by the customer as :**

PRODUCT: EPDM  
TYPE: SHEET

**Objective (s):** Determination of Cadmium (Cd), Hexavalent Chromium (Cr6+), Lead (Pb), Mercury (Hg), Phthalates, Polybrominated Biphenyl (PBBs), Polybrominated Diphenyl Ether (PBDEs) with RoHS Directive 2011/65/EU and (EU) 2015/863 (amendment in Annex II)

**Conclusion:**

Test(s) Required	Compliance with Objective(s)
Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium VI, Monobromobiphenyl, Dibromo biphenyls, Tribromo biphenyls, Tetrabromo biphenyls, Pentabromo biphenyls, Hexabromo biphenyls, Heptabromobiphenyl, Octabromo biphenyls, Nonabromo biphenyls, Decabromo biphenyls, Sum Polybrominated Biphenyles (PBB), Monobromodiphenyl ether, Dibromodiphenylether, Tribromo diphenyl ethers, Tetrabromo diphenyl ethers, Pentabromodiphenyl ether, Hexabromo diphenyl ethers, Heptabromo diphenyl ethers, Octabromo diphenyl ethers, Nonabromo diphenyl ethers, Decabromo diphenyl ethers, Sum Polybrominated Diphenyl Ether (PBDE), Benzyl butyl phthalate (BBP), Bis(2-ethylhexyl)phthalate (DEHP), Dibutyl phthalate (DBP), Di-isobutyl phthalate (DiBP)	Comply

**Test Result(s):**

Analysis	Industrial Products Analysis	Unit	Result	LOQ	Test Method	Specification
SVK51	Cadmium (Cd)	mg/kg	1.0	1	IEC 62321-5	≤100mg/kg
SVL03	Lead (Pb)	mg/kg	22	10	IEC 62321-5	≤1000mg/kg
SVK82	Mercury (Hg)	mg/kg	ND(<LOQ)	5	IEC 62321-4	≤1000mg/kg
SVV1M	Hexavalent Chromium (Cr6+)	mg/kg	ND(<LOQ)	20	IEC 62321-7-2	≤1000mg/kg
SVK16	<b>Polybrominated Biphenyl (PBBs)</b>				IEC 62321-6	
	Monobromobiphenyl	mg/kg	ND(<LOQ)	20		Refer Note 2
	Dibromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Tribromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Tetrabromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Pentabromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Hexabromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Heptabromobiphenyl	mg/kg	ND(<LOQ)	20		Refer Note 2
	Octabromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Nonabromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Decabromo biphenyls	mg/kg	ND(<LOQ)	20		Refer Note 2
	Sum Polybrominated Biphenyles (PBB)	mg/kg	ND(<LOQ)	-		≤1000mg/kg

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Analysis	Industrial Products Analysis	Unit	Result	LOQ	Test Method	Specification
SVK17	<b>Polybrominated Diphenyl Ether (PBDEs)</b>				IEC 62321-6	
	Monobromodiphenyl ether	mg/kg	ND(<LOQ)	20		Refer Note 2
	Dibromodiphenylether	mg/kg	ND(<LOQ)	20		Refer Note 2
	Tribromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Tetrabromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Pentabromodiphenyl ether	mg/kg	ND(<LOQ)	20		Refer Note 2
	Hexabromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Heptabromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Octabromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Nonabromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Decabromo diphenyl ethers	mg/kg	ND(<LOQ)	20		Refer Note 2
	Sum Polybrominated Diphenyl Ether (PBDE)	mg/kg	ND(<LOQ)	-		≤1000mg/kg
SVV1Q	<b>Phthalates</b>				IEC 62321-8	
	Benzyl butyl phthalate (BBP)	% (w/w)	ND(<LOQ)	0.02		≤0.1%
	Bis(2-ethylhexyl)phthalate (DEHP)	% (w/w)	ND(<LOQ)	0.02		≤0.1%
	Dibutyl phthalate (DBP)	% (w/w)	ND(<LOQ)	0.02		≤0.1%
	Di-isobutyl phthalate (DiBP)	% (w/w)	ND(<LOQ)	0.02		≤0.1%

Specification Note

- RoHS Directive 2011/65/EU and (EU) 2015/863 (amendment in Annex II)
- Based on sum amount of PBB/PBDE limit, which is ≤1000mg/kg

Remark

- The test portion was totally dissolved for cadmium, lead & mercury test by using pre-conditioning method as mentioned above.
- IEC 62321 flowchart can be obtained from <https://cdnmedia.eurofins.com/apac/media/601319/efctm001issue01.pdf>
- The test portion was ashed before the pre-conditioning method for Cadmium & Lead test as mentioned above.

Version Remark(s):

- Analytical Report AR-20-SV-022469-02 issued on 14/07/2020 will supersede previous version of report(s). Upon receipt of this revised copy, all earlier version of report(s) will be invalid immediately.

This 3 page(s) of report and its attachment(s), if relevant, has/have been validated by



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**EXPLANATORY NOTE**

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- test is subcontracted outside Eurofins group and is not accredited

**N/A** means not applicable

**ND** denotes not detected for value obtained is less than the Limit of Quantification (LOQ)

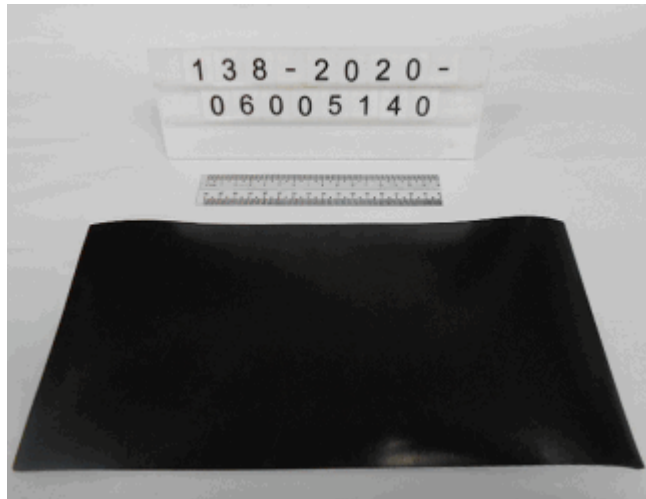
**<LOQ** means not detected at or below the Limit of Quantification (LOQ)

The result(s) relate(s) only to the item (s) tested.

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**Sample Photograph(S)**



- End of Report -