

TEST REPORT

Report No: AR-21-SV-029824-01
Customer: CSC STEEL SDN. BHD.
Date of Issue: 04/08/2021



Batch No: EUMYBM-00087483
Sample No: 138-2021-07003224

To: CSC STEEL SDN. BHD.
 180, Kawasan Industri Ayer Keroh,
 Ayer Keroh,
 75450 Melaka
 MALAYSIA

Attn: Ms. Chee Sook Jin

Date Sample Received: 26/07/2021
Date of Testing: 27/07/2021 to 30/07/2021

The following sample was identified by the customer as :
 SAMPLE DESCRIPTION: PICKLED & OILED STEEL SAMPLE
 SAMPLE ID: JW7172

Objective (s): Determination of Cadmium (Cd), Hexavalent Chromium (Cr6+), Lead (Pb), Mercury (Hg), Phthalates, Polybrominated Biphenyl (PBBs), Polybrominated Diphenyl Ether (PBDEs) with RoHS Directive 2002/95/EC, Directive 2011/65/EU and (EU) 2015/863 (amendment in Annex II).

Conclusion :

Test(s) Required	Compliance with Objective(s)
1. Cadmium (Cd), 2. Lead (Pb), 3. Mercury (Hg), 4. Hexavalent Chromium (Cr6+), 5. Sum Polybrominated Biphenyls (PBB), 6. Sum Polybrominated Diphenyl Ether (PBDE), 7. Benzyl butyl phthalate (BBP), 8. Bis(2-ethylhexyl)phthalate (DEHP), 9. Dibutyl phthalate (DBP), 10. Di-isobutyl phthalate (DiBP)	Comply

Test Result(s):

Analysis	Industrial Products Analysis	Unit	Result	LOQ	Test Method	Specification
SVK51	Cadmium (Cd)	mg/kg	<LOQ	1	IEC 62321-5	≤100mg/kg
SVL03	Lead (Pb)	mg/kg	<LOQ	10	IEC 62321-5	≤1000mg/kg
SVK82	Mercury (Hg)	mg/kg	<LOQ	5	IEC 62321-4	≤1000mg/kg
SVK66	Hexavalent Chromium (Cr6+)	-	negative	-	IEC 62321-7-1	≤1000mg/kg (Refer Note 2)
SVK16	Polybrominated Biphenyl (PBBs)				IEC 62321-6	
	Monobromobiphenyl	mg/kg	<LOQ	20		Refer Note 3
	Dibromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Tribromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Tetrabromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Pentabromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Hexabromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Heptabromobiphenyl	mg/kg	<LOQ	20		Refer Note 3
	Octabromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Nonabromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Decabromo biphenyls	mg/kg	<LOQ	20		Refer Note 3
	Sum Polybrominated Biphenyls (PBB)	mg/kg	<LOQ	20		≤1000mg/kg
SVK17	Polybrominated Diphenyl Ether (PBDEs)				IEC 62321-6	
	Monobromodiphenyl ether	mg/kg	<LOQ	20		Refer Note 3

TEST REPORT

Report No: AR-21-SV-029824-01
Customer: CSC STEEL SDN. BHD.
Date of Issue: 04/08/2021



Batch No: EUMYBM-00087483
Sample No: 138-2021-07003224

Analysis	Industrial Products Analysis	Unit	Result	LOQ	Test Method	Specification
	Dibromodiphenylether	mg/kg	<LOQ	20		Refer Note 3
	Tribromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Tetrabromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Pentabromodiphenyl ether	mg/kg	<LOQ	20		Refer Note 3
	Hexabromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Heptabromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Octabromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Nonabromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Decabromo diphenyl ethers	mg/kg	<LOQ	20		Refer Note 3
	Sum Polybrominated Diphenyl Ether (PBDE)	mg/kg	<LOQ	20		≤1000mg/kg
SVV1Q	Phthalates				IEC 62321-8	
	Benzyl butyl phthalate (BBP)	% (w/w)	<LOQ	0.02		≤0.1%
	Bis(2-ethylhexyl)phthalate (DEHP)	% (w/w)	<LOQ	0.02		≤0.1%
	Dibutyl phthalate (DBP)	% (w/w)	<LOQ	0.02		≤0.1%
	Di-isobutyl phthalate (DiBP)	% (w/w)	<LOQ	0.02		≤0.1%

Specification Note

- RoHS Directive 2011/65/EU and (EU) 2015/863 (amendment in Annex II)
- Expression result for Hexavalent Chromium
 - Concentration of Hexavalent chromium ($<0.10 \mu\text{g}/\text{cm}^2$) = Negative (sample coating is consider non Cr(VI) based coating)
 - Concentration of Hexavalent chromium (≥ 0.10 and $\leq 0.13 \mu\text{g}/\text{cm}^2$) = Inconclusive (Unavoidable coating variations may influence the determination)
 - Concentration of Hexavalent chromium ($\geq 0.13 \mu\text{g}/\text{cm}^2$) = Positive (Sample coating is consider to contain Cr(VI))
- Based on sum amount of PBB/PBDE limit, which is $\leq 1000 \text{mg}/\text{kg}$

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://admin.apac-websites.eurofins.com/media/606192/efctm001-issue-2.pdf>

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



Chow Khim Tan, M.Sc. in Chemistry
 IKM Registered Chemist
 Registered No.:M/3944/6697/13

TEST REPORT

Report No: AR-21-SV-029824-01
 Customer: CSC STEEL SDN. BHD.
 Date of Issue: 04/08/2021



Batch No: EUMYBM-00087483
 Sample No: 138-2021-07003224

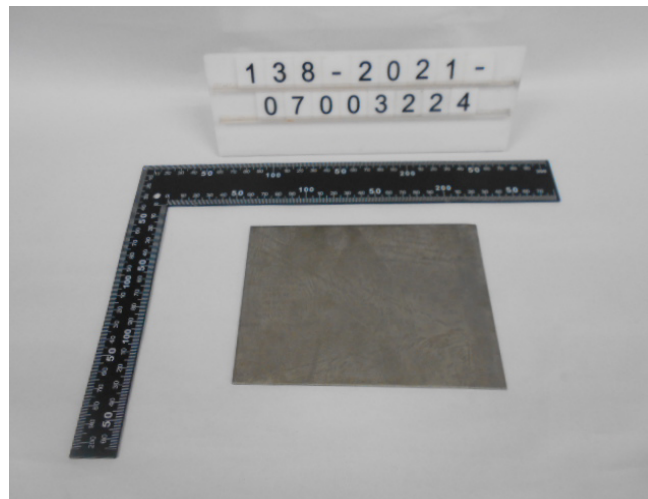
EXPLANATORY NOTE

This analytical report shall not be reproduced except in full, without approval of Eurofins NM Laboratory Sdn Bhd.
 The result(s) relate(s) only to the item(s) tested.
 Eurofins general terms and conditions of sales (Malaysia) apply.

- ◆ Test result is not SAMM accredited.
- Test result is externally provided within Eurofins group and is accredited.
- Test result is externally provided within Eurofins group but is not accredited.
- Test result is externally provided outside Eurofins group and is accredited.
- Test result is externally provided outside Eurofins group but is not accredited.

- N/A means not applicable.
- ND means not detected for value obtained is less than the Limit of Detection (LOD).
- <LOD means not detected at or below the Limit of Detection (LOD).
- <LOQ means below the Limit of Quantification (LOQ)

Sample Photograph(S)



- End of Report -