



检测报告

Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 1 页 共 14 页
Page 1 of 14

报告抬头公司名称 苏州力湃消防科技有限公司
Company Name SUZHOU LIPAI FIREFIGHTING TECHNOLOGY CO., LTD.
shown on Report
地 址 苏州高新区滨河路 337 号 F9F905-C08
Address F9F905-C08, NO.337, BINHE ROAD, HIGH-TECH ZONE, SUZHOU CITY.

以下测试之样品及样品信息由申请者提供并确认

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

产品名称 Product Name 气溶胶灭火装置 Condensed Aerosol Fire Extinguishing Device
样品型号 Model No. QRR0.01-3.0
样品接收日期 2025.08.05
Sample Received Date Aug. 5, 2025
样品检测日期 2025.08.05-2025.08.19
Testing Period Aug. 5, 2025 to Aug. 19, 2025

检测要求 请参见下页。
Test Requested Please refer to the following page(s).

检测依据/检测结果 请参见下页。
Test Method/Test Result(s) Please refer to the following page(s).

批 准

日 期

2025.08.19



刘琳慧

Date

刘琳慧

授权签字人 Lab Authorized
Signatory

No. T788049178

广东省深圳市宝安区新安街道兴东社区华测检测大楼

检测检测专用章 集团股份有限公司
Inspection & Testing Signatures
Centre Testing International Group Co., Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

检测报告
Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 2 页 共 14 页
Page 2 of 14

结论 Conclusion

测试样品 Tested Sample	依据标准/指令 According to standard/directive	结果 Result
提交样品 Submitted Sample	欧盟 RoHS 指令 2011/65/EU 及其 修订指令(EU) 2015/863 RoHS Directive 2011/65/EU with amendment (EU) 2015/863	符合 PASS

符合表示检测结果满足欧盟 RoHS 指令 2011/65/EU 及其修订指令(EU) 2015/863 要求的限值。
PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

检测报告
Test Report

报告编号 A2250563291101E 第3页 共14页
Report No. A2250563291101E Page 3 of 14

检测要求 1.根据客户要求,对所提交样品中铅(Pb)、镉(Cd)、汞(Hg)、铬(Cr)、溴(Br)以及邻苯二甲酸酯【邻苯二甲酸二正丁酯(DBP)、邻苯二甲酸丁基苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)】进行筛选测试。
2.根据客户要求,当筛选结果超出 IEC 62321-3-1:2013 所规定的筛选限值或本报告中所列邻苯二甲酸酯筛选限值时,进一步采用更精确的化学方法对所提交样品中的铅(Pb)、镉(Cd)、汞(Hg)、六价铬(Cr(VI))、多溴联苯(PBBs)、多溴二苯醚(PBDEs)和邻苯二甲酸酯【邻苯二甲酸二正丁酯(DBP)、邻苯二甲酸丁基苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)】进行测试。

Test Requested 1. As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr), Bromine(Br), Phthalates (Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP), Diisobutyl phthalate(DIBP)) in the submitted sample(s).
2.As specified by client, when screening results exceed the screening limit in IEC 62321-3-1:2013 or screening limit of Phthalates in this report, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) and Phthalates (Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP), Diisobutyl phthalate(DIBP)) in the submitted samples.

检测依据 Test Method

A. IEC 62321-3-1:2013 对管控元素的筛选限值 Screening limits for regulated elements according to IEC 62321-3-1:2013 (单位 Unit: mg/kg)

Table with 4 columns: 测试元素 Element(s), 聚合物 Polymers, 金属 Metals, 合成材料 Composite material. Rows include Pb, Cd, Hg, Cr, Br with their respective screening limits.

B. 邻苯二甲酸酯的筛选限值 Screening limits for Phthalates

Table with 2 columns: 测试项目 Test Item(s), 筛选限值 Screening limits(单位 Unit: mg/kg). Rows include Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP), and Diisobutyl phthalate(DIBP).

检测报告
Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 4 页 共 14 页
Page 4 of 14

C. 化学测试 Chemical Test

测试项目 Tested Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)	报告限 RL	限值 Limit
铅 Lead (Pb)	IEC 62321-5:2013	ICP-OES	10 mg/kg	1000 mg/kg
镉 Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	10 mg/kg	100 mg/kg
汞 Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES	10 mg/kg	1000 mg/kg
六价铬 Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017	UV-Vis	20 mg/kg	1000 mg/kg
	IEC 62321-7-1:2015		0.10 µg/cm ² (LOQ)	
多溴联苯 Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	100 mg/kg	1000 mg/kg
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	100 mg/kg	1000 mg/kg
邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS	50 mg/kg	单项 1000 mg/kg 1000 mg/kg for each

备注 Remark:

- BL = 低于筛选限值 Below limit
- OL = 高于筛选限值 Over limit
- X = 需要做进一步测试的范围 The region where further investigation is necessary
- 3σ = 分析仪器的重复性 The reproducibility of analytical instruments
- N/A = 不适用 Not applicable
- LOD = 方法检出限 Limit of Detection
- LOQ = 定量限，六价铬的定量限为 0.10 µg/cm² Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 µg/cm²
- RL=Report Limit

检测报告
Test Report

报告编号A2250563291101E
Report No. A2250563291101E

第 5 页 共 14 页
Page 5 of 14

检测结果 Test Result(s)

根据物料风险评估的结果，验证送测样品中以下材料。In accordance with the result of material risk assessment, the following disjointed parts in the submitted sample have been verified.

CTI 样品 ID CTI Sample ID	样品描述 Sample Description	测试项目 Tested Items	XRF 扫描结果 XRF Screening Test	邻苯二甲酸酯筛选结果 Phthalates Screening Test	化学测试结果 Chemical Test (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/ Resubmitted Date
1	黑色涂层 Black coating	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		
2	金属基材 Metal base	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	N/A	/	/		
		Br(PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
		DIBP	N/A	/	/		
3	有黑色覆盖层的金属 Metal with black covering layer	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	N/A	/	/		
		Br(PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
		DIBP	N/A	/	/		

检测报告
Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 6 页 共 14 页
Page 6 of 14

CTI 样品 ID CTI Sample ID	样品描述 Sample Description	测试项目 Tested Items	XRF 扫描结果 XRF Screening Test	邻苯二甲酸酯筛选结果 Phthalates Screening Test	化学测试结果 Chemical Test (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/Resubmitted Date
4	银色胶带 Silvery adhesive tape	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		
5	透明塑料 Transparent plastic	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		
6	有粘胶的黄色纸 Yellow paper with adhesive paste	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		

检测报告
Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 7 页 共 14 页
Page 7 of 14

CTI 样品 ID CTI Sample ID	样品描述 Sample Description	测试项目 Tested Items	XRF 扫描结果 XRF Screening Test	邻苯二甲酸酯筛选结果 Phthalates Screening Test	化学测试结果 Chemical Test (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/Resubmitted Date
7	黑色套管 Black tube	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		
8	黑色软塑料 Black soft plastic	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		
9	金色金属 Golden metal	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	N/A	/	/		
		Br(PBDEs)	N/A	/	/		
		DBP	N/A	/	/		
		BBP	N/A	/	/		
		DEHP	N/A	/	/		
		DIBP	N/A	/	/		

检测报告
Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 8 页 共 14 页
Page 8 of 14

CTI 样品 ID CTI Sample ID	样品描述 Sample Description	测试项目 Tested Items	XRF 扫描结果 XRF Screening Test	邻苯二甲酸酯筛选结果 Phthalates Screening Test	化学测试结果 Chemical Test (mg/kg)	结论 Conclusion	样品提交/再次提交日期 Sample Received/Resubmitted Date
10	蓝色塑料 Blue plastic	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		
11	红色塑料 Red plastic	Pb	BL	/	/	符合 PASS	2025.08.05 Aug. 5, 2025
		Cd	BL	/	/		
		Hg	BL	/	/		
		Cr(Cr(VI))	BL	/	/		
		Br(PBBs)	BL	/	/		
		Br(PBDEs)	BL	/	/		
		DBP	N/A	BL	/		
		BBP	N/A	BL	/		
		DEHP	N/A	BL	/		
		DIBP	N/A	BL	/		

检测报告

Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 9 页 共 14 页
Page 9 of 14

备注 Remark:

- N.D. = 未检出(小于方法检出限或报告限) Not Detected (<MDL or RL)
- MDL = Method Detection Limit
- mg/kg = ppm = 百万分之一 parts per million
- 1000 mg/kg = 0.1%
- / = 未检测 Not tested
- N/A = 不适用 Not applicable
- BL = 低于筛选限值 Below limit
- RL=Report Limit
- 对于多溴联苯 (PBBs) 和多溴二苯醚 (PBDEs), XRF 筛选时其结果显示的是总溴含量; 对于六价铬, XRF 筛选时其结果显示的是总铬含量。When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.
- 豁免清单请见官网 <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011L0065>
Exemption list please see the official website
<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011L0065>
- 本报告根据物料风险评估的结果, 对样品图片中指示部位进行了验证测试并得出结论。
According to the result of material risk assessment, the conclusions of report are based on the verification test results of the specified parts of sample photos.
- 测试结果仅针对客户选择的测试的样品, 不代表整机中全部材料。The test results are only for the test samples selected by the customer and do not represent all the materials in the finished product.

注释 Note:

- 本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。
The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

检测报告

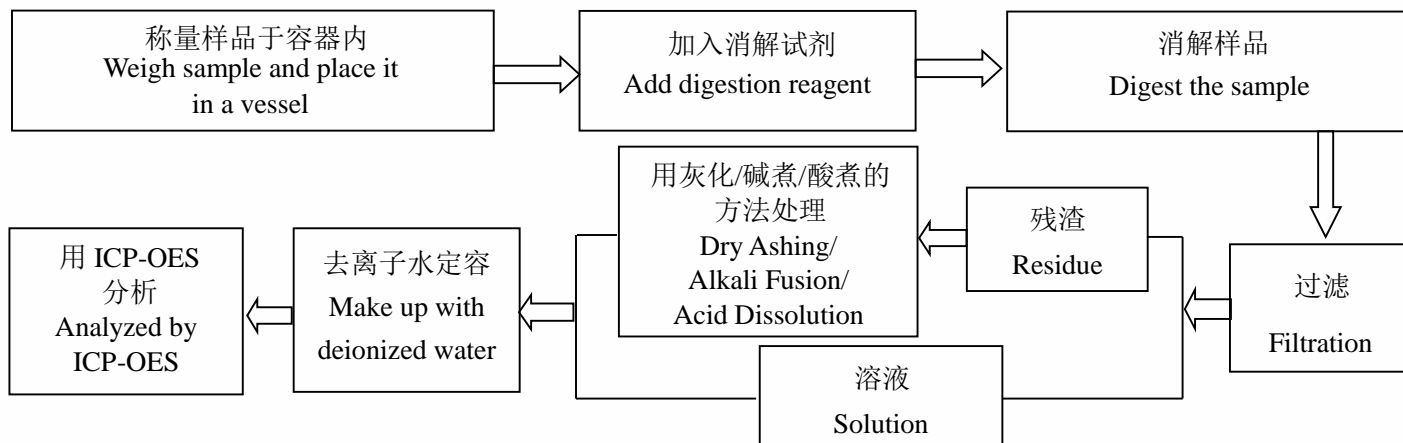
Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

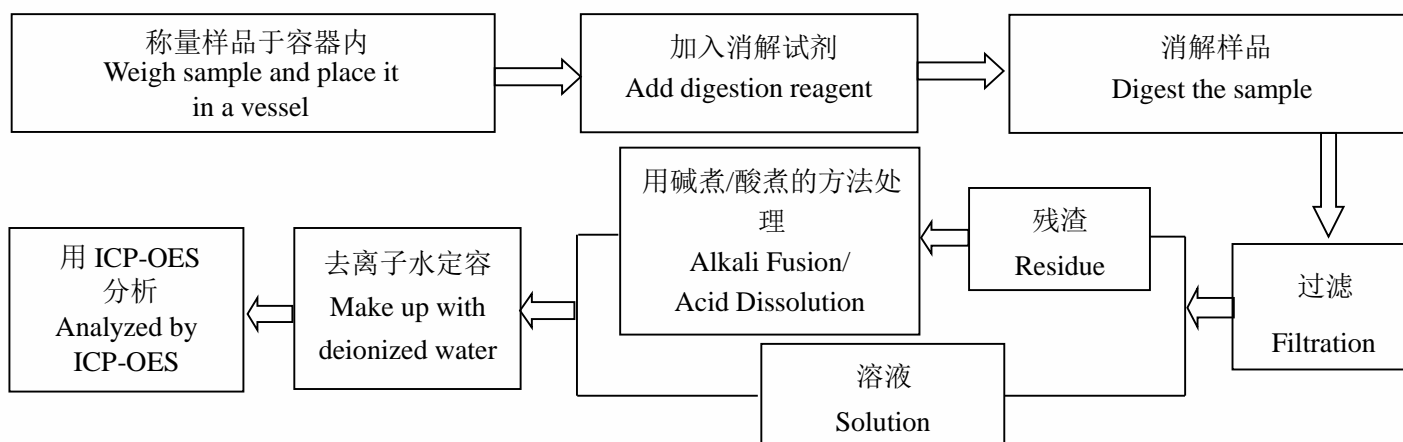
第 10 页 共 14 页
Page 10 of 14

检测流程 Test Process

1. 铅 Lead (Pb), 镉 Cadmium (Cd)

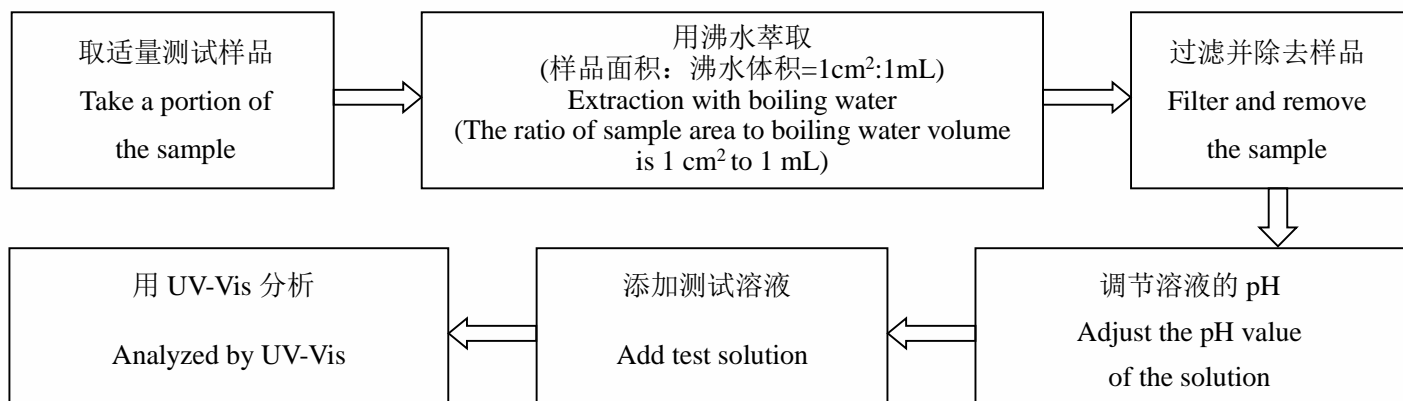


2. 汞 Mercury(Hg)



3. 六价铬 Hexavalent Chromium (Cr(VI))

(1) IEC 62321-7-1:2015

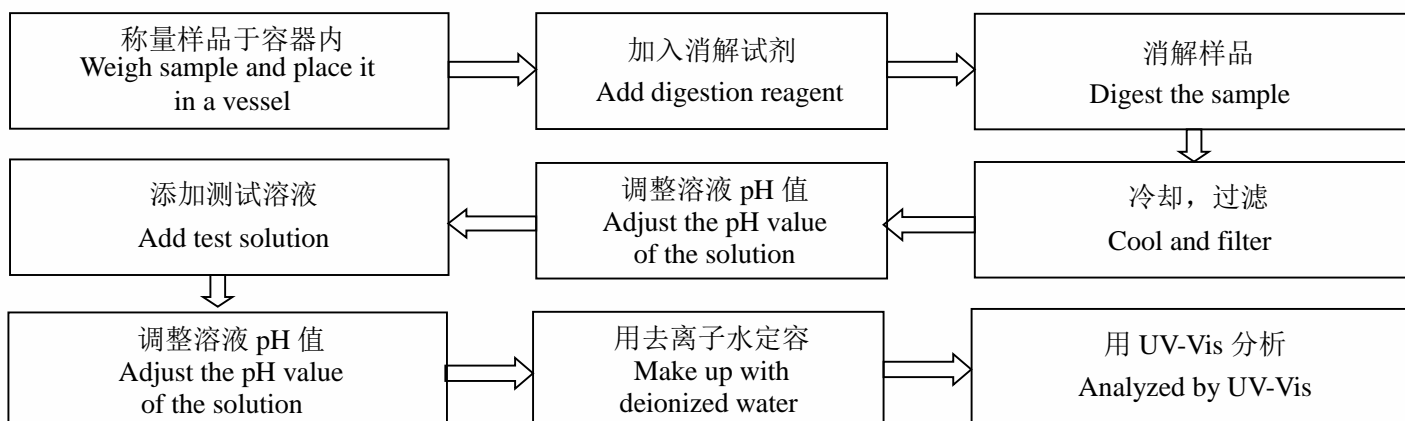


检测报告 Test Report

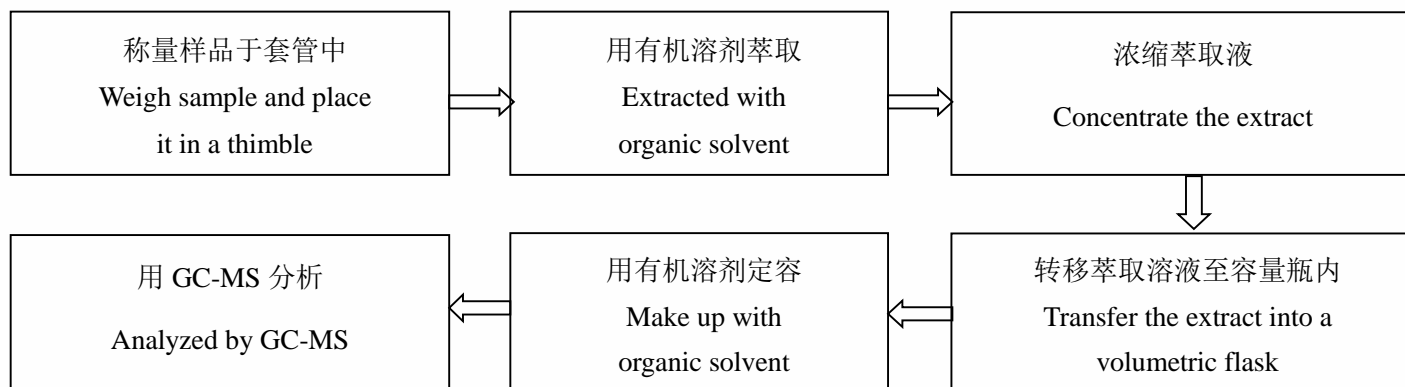
报告编号 A2250563291101E
Report No. A2250563291101E

第 11 页 共 14 页
Page 11 of 14

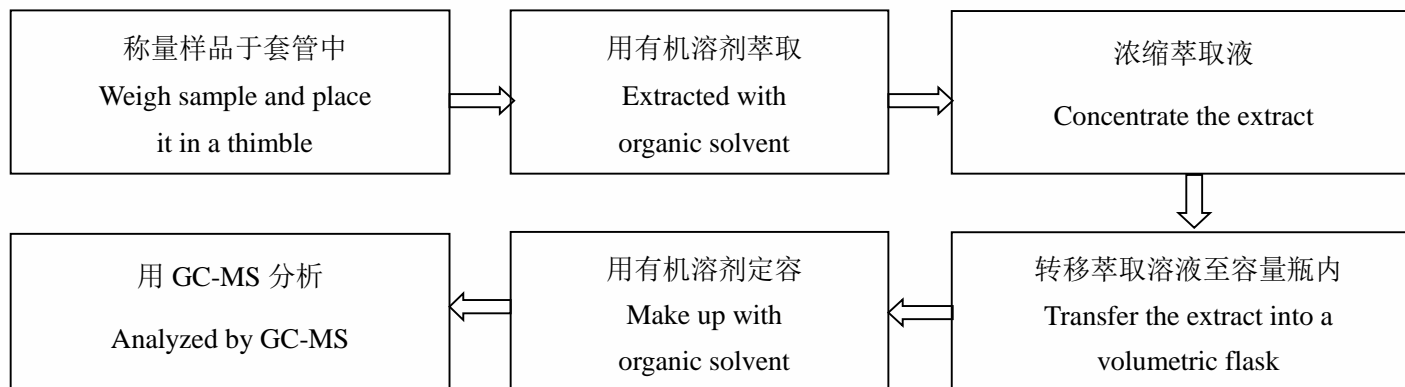
(2) IEC62321-7-2:2017



4. 多溴联苯 Polybrominated Biphenyls (PBBs), 多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)



5. 邻苯二甲酸酯 Phthalates(DBP, BBP, DEHP, DIBP)



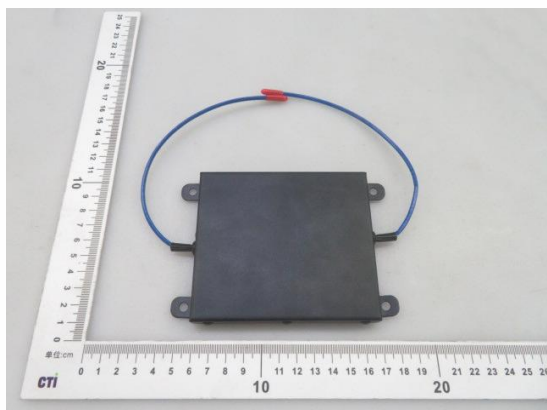
检测报告 Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

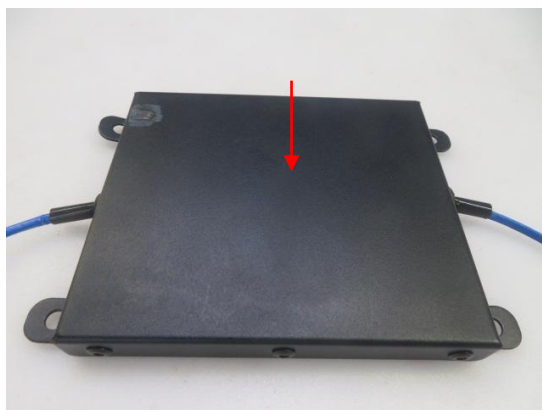
第 12 页 共 14 页
Page 12 of 14

样品图片 Photo(s) of the sample(s)

成品 Final Product



2

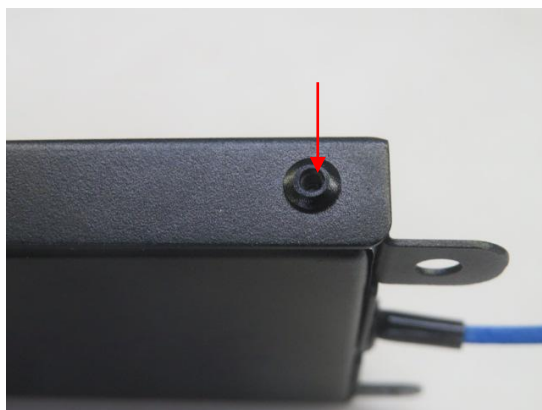


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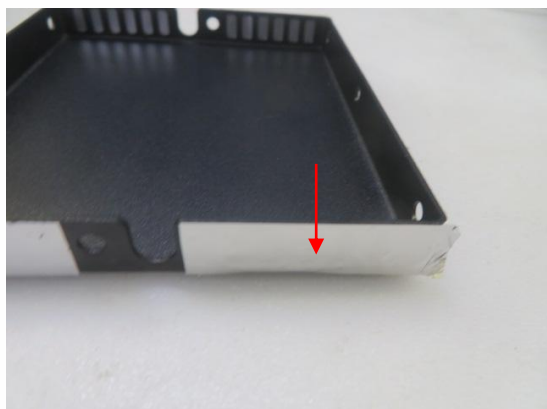
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4



5



检测报告 Test Report

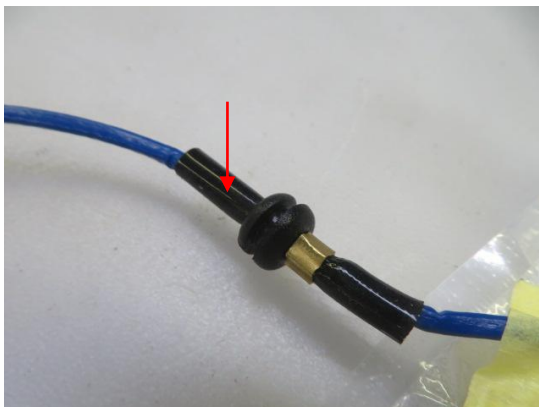
报告编号 A2250563291101E
Report No. A2250563291101E

第 13 页 共 14 页
Page 13 of 14

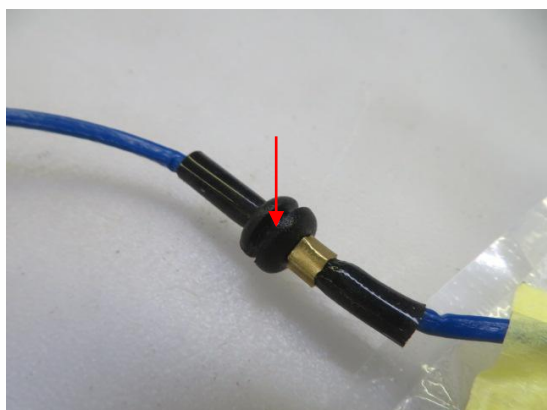
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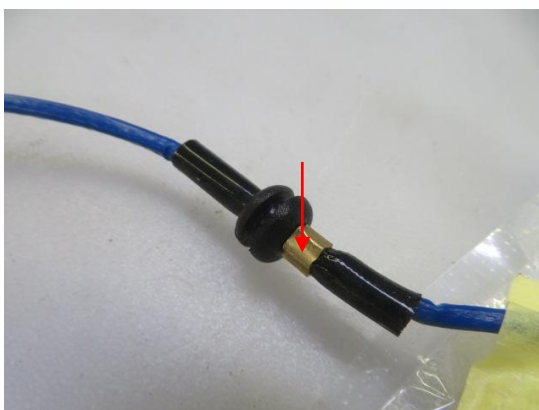
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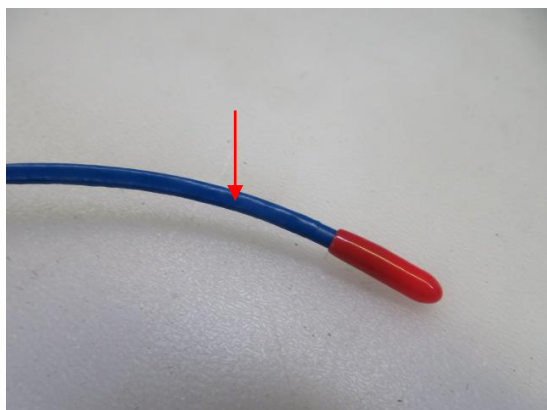
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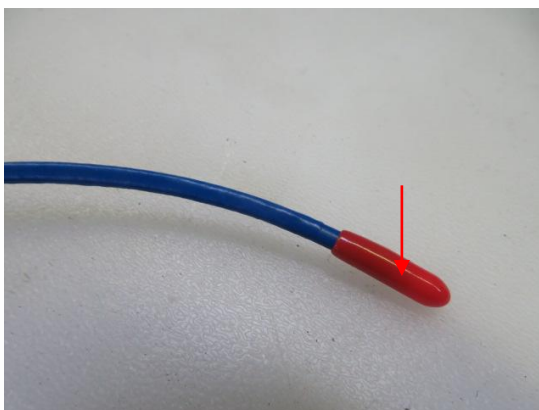
9



10



11



检测报告 Test Report

报告编号 A2250563291101E
Report No. A2250563291101E

第 14 页 共 14 页
Page 14 of 14

声明 Statement:

1. 本报告无批准人签字、“专用章”及报告骑缝章无效;
This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;
The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. 本报告检测结果仅对受测样品负责;
The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明, 报告参照 ILAC-G8:09/2019 / CNAS-GL015:2022 使用简单接受 (w=0) 二元判定规则进行符合性判定; Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022.
5. 未经 CTI 书面同意, 不得部分复制本报告;
Without written approval of CTI, this report can't be reproduced except in full;
6. 如报告中的英文内容与中文内容有差异, 以中文为准。
In case of any discrepancy between the English version and Chinese version of the reports (if generated), the Chinese version shall prevail.

*** 报告结束 ***

***End of report ***

CERTIFICATE



No. 0P250808.SLFQC31

Test Report / Technical Construction File no. TCGD25080574150

Certificate's
Holder:

Suzhou Lipai Firefighting Technology Co., Ltd.
F9F905-C08, No.337, Binhe Road, High-tech Zone, Suzhou City.

Certification
ECM Mark



Product:

Condensed Aerosol Fire Extinguishing Device

Logo:

LIPAI

Model(s):

(see the following annex)

Verification to:

Standard:

EN 15276-1:2019, EN 15276-2:2019, EN 15004-1:2024

related to CE Directive(s):
2006/42/EC (Machinery)

Remark:

The manufacturer has voluntarily decided to submit its documents concerning the above-mentioned product for verification. Ente Certificazione Macchine confirms that the documentation made available and immediately returned to it, as containing sensitive data, meets the essential requirements of the above-mentioned directive/standard. The verification activity carried out exclusively concerned the technical documentation and no verification was carried out on the product. This document cannot replace the EC Declaration of Conformity. This document was issued in accordance with regulation RGVOL01 published on the website of www.entecerma.it and concerning voluntary certifications with a non-notified procedure.

Issuance date: 08 August 2025

Expiry date: 07 August 2030

For online check:



Approver
Ente Certificazione Macchine
Legal Representative
Luca Bedonni



Annex I



No. 0P250808.SLFQC31

Test Report / Technical Construction File no. TCGD25080574150

Model(s):

QRR0.01GW/S-LIPAI, QRR0.012GW/S-LIPAI, QRR0.02GW/S-LIPAI,
QRR0.03GW/S-LIPAI, QRR0.04GW/S-LIPAI, QRR0.06GW/S-LIPAI,
QRR0.08GW/S-LIPAI, QRR0.1GW/S-LIPAI, QRR0.144GW/S-LIPAI,
QRR0.15GW/S-LIPAI, QRR0.16GW/S-LIPAI, QRR0.2GW/S-LIPAI,
QRR0.25GW/S-LIPAI, QRR0.3GW/S-LIPAI, QRR0.5GW/S-LIPAI,
QRR1.0GW/S-LIPAI, QRR2.0GW/S-LIPAI, QRR3.0GW/S-LIPAI





Safety Data Sheet
According to Regulation (EC) No 1907/2006, Annex II,
Amended by COMMISSION REGULATION (EU) 2020/878,
According to REGULATION (EC) No 1272/2008
LIPAI Dry Sprinkler Powder Aerosol Generators

Version 1.0

Issue date: 14-03-2022

Revision date: 14-03-2022

SDS Record Number: SSS-TCO-010-150638

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: LIPAI Dry Sprinkler Powder Aerosol Generators
Additional identification: Nanoform is NOT covered by this SDS.
UFI: N/A
Identification of the product: See section 3
Index Number: See section 3
REACH registration No.: See section 3

1.2 Relevant identified uses of the substance or mixture and uses advised against:

1.2.1 Identified uses:

Can be used for operational application during localization and extinguishing fire of class A, B and C, localization of fire of class A in closed spaces up, and electrical fires (voltage < 40 kV) eg. blind floor/ceilings, cable ducts and other small volume applications.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): -
Supplier(Manufacturer): LIPAI
Address: Room720,BuildingA, Xinshang Plaza,Xiangcheng District,Suzhou City, JiangsuProvince
Contact person(E-mail): hafo1083263160@163.com
Telephone: +86 13714003929
Fax: +86 13714003929

1.4 Emergency telephone Number:

The Netherlands: National Poison Information Centre: +31 (0) 30 247 88 88
Belgium: Belgian Poison Centre: +32 (0) 70 245 245
United Kingdom: UWIC: +44 (0) 29 204 16388

Only available during office hours (9:00a.m.-17:30p.m.)

Available outside office hours? YES ☐ NO ☒

Section 2 Hazards Identification

2.1 Classification of the substance or mixture:

2.1.1 Classification of the mixture:

The mixture is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement

Skin Sens. 1	H317
Eye Irrit. 2	H319

For full text of H- phrases: see section 2.2.

2.2 Label elements:

Hazard pictogram(s):



Signal word:

Warning

Hazard statement(s):

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

Precautionary statement(s):

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P362 + P364: Take off contaminated clothing and wash it before reuse.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental Hazard information (EU)

Not applicable.

2.3 Other hazards:

The mixture does not contain PBT/vPvB substance.

The mixture does not contain endocrine disruptor.

Section 3 Composition/information on ingredients

Substance/Mixture:

Mixture

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration	Classification	Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)
Potassium nitrate	01-2119488224-35	7757-79-1	231-818-8	> 50 %	Not Classified	N/A
Cyanoguanidine	01-2119474914-28	461-58-5	207-312-8	10 - 30 %	Not Classified	N/A
Formaldehyde, oligomeric reaction products with phenol	01-2120735197-51	9003-35-4	500-005-2	5 - 15 %	H317 H319 H412	N/A

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

Product name: LIPAI Dry Sprinkler Powder Aerosol Generators

Version #: 1.0

Issue date: 14-03-2023.

Revision date: 14-03-2023.

SDS EU

2 / 8

4.1.1 In case of inhalation:

Remove to fresh air. If the victim is not breathing, apply artificial respiration.

4.1.2 In case of skin contact:

Wash immediately with plenty of water and soap.

4.1.3 In case of eyes contact:

Remove contact lenses, if present, and immediately rinse eyes while holding eyelids open for a sufficient period of time (at least 15 minutes) with lukewarm water. Help the victim with the rinsing process. Then immediately consult a physician/ophthalmologist.

4.1.4 In case of ingestion:

Rinse mouth immediately with water (if conscious). Do not induce vomiting. If the person feels unwell consult a physician or take victim to hospital (show packaging, label or SDS to physician). If the person needs to vomit, keep their head low to prevent vomit from entering the lungs. Place unconscious person on the side in the recovery position. Loosen tight clothing such as a shirt collar, tie, belt or waistband. Rest.

4.2 Most important symptoms and effects, both acute and delayed:

After inhalation: Exposure to vapour concentrations of component dusts higher than the MAC value can be harmful to the health. Potential health effects include: slight irritation of the airways, sore throat and coughing. The product may cause effects on the blood, resulting in formation of methaemoglobin when ingested. The effects may be delayed. Smoke and gases released during intended use is harmful upon inhalation.

After skin contact: Slightly irritating to the skin. Redness. Contact with the preparation may result in contact eczema, sensitisation, skin cracking and swelling. Prolonged or repeated exposure may damage the skin and may cause irritation eczema.

After eye contact: May cause irreversible damage to the eyes. Redness. Pain. Particle matter may cause physical injury to the eye.

After ingestion: Nausea, abdominal pain, blue skin. Product can act on the thyroid gland. Exposure can lead to blood disorders (mild methemoglobinemia). Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown coloured blood.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: None – this is an extinguishing agent.

Unsuitable extinguishing media: None.

5.2 Special hazards arising from the substance or mixture

Inhalation of gaseous extinguishing aerosol formed by the discharge.

5.3 Advice for firefighters:

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Wear chemical resistant oversuit. Cool down the containers / tanks with water spray.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel: If exposure to extinguishing discharging aerosol is possible, the people should always be evacuated as quickly as possible. Ventilate the rooms, areas and zones where agent may have been entered.

6.1.2 For emergency responders: Evacuate personnel to safe areas. Keep people away from and upwind of

6.2 Environmental Precautions:

6.3 Methods and material for Containment and Cleaning up:

6.4 Reference to other sections:

spill/leak. Ventilate the area. Wear suitable protective clothing.

Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

Improper discharge could result in the deposit of small, localized areas of highly concentrated agglomerated particulate on that surface. If left untended, an agglomerated mass may take on moisture and may cause non-progressive surface discoloration of unprotected metal surfaces. Any agglomerated particulate must be cleaned up with a water/alcohol solution no later than 12 hours following a discharge.

Collect spilled material by hand, e.g. with a dustpan and duster or a vacuum cleaner.

Use of a blower for cleaning is not permitted.

Collect the waste product in suitable drums for disposal.

Wash the spillage area clean with plenty of water.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures:

When handling observe the usual precautionary measures for chemicals. Prevent dust formation and inhalation of dust. If intense aerosol is released from a dry sprinkler powder system, respiratory protection is required. Wear suitable protective clothing. Eye-wash fountain, particularly with the danger of dust formation. Avoid contact with eyes and prolonged skin contact. Do not smoke, eat or drink during use of the unpacked product.

7.1.2 Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Keep away from heat sources. Store the product dry. Store in original LIPAI packaging at room temperature. Suitable packaging material: Original LIPAI packaging. Product is hygroscopic; prevent contact with other liquids. Keep tanks / packing hermetically closed. Prevent product temperatures above 75 °C and below -50 °C.

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Potassium nitrate (CAS#7757-79-1): Concentration limit: Long - term exposure limit value: 5 mg/m³ (Lithuania)

Formaldehyde, oligomeric reaction products with phenol (CAS#9003-35-4): Concentration limit: Long - term exposure limit value: 3 mg/m³ (Lithuania)

8.1.2 Additional exposure limits under the conditions of use:

Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

Not available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection:

Tight fitting acid resistant safety glasses (EN 166). Full face mask with safety glasses if dust formation may occur.

Skin protection

Hand protection:	Safety gloves.
Body protection:	Wear appropriate chemical protective clothing (preferably thick cotton or in case of dust risk EN ISO 13982-1 [type 5]).
Respiratory protection:	Required at inadequately ventilated workplaces or in case of dust formation. In case of handling the unpacked product (the chemicals) use respiratory protection (FFP-P2 mask EN149).
Thermal hazards:	Wear suitable protective clothing to prevent heat.
8.2.3 Environmental exposure controls:	Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	Solid (pressed compound in rigid steel casing).
Colour:	Beige / light red.
Odour:	None specific
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	Not available
Boiling point/range (°C):	Not available
Flash point (°C):	Not available
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not available
Ignition temperature (°C):	Not available
Upper/lower explosive limits:	Not available
Vapour pressure (20°C):	Not available
Vapour density:	Not available
Relative Density:	1.9
Bulk density (kg/m³):	Not available
Water solubility (g/l):	Slight (< 1 %)
n-Octanol/Water (log Po/w):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	Not available
Explosive properties:	Not available
Oxidising properties:	Not available

9.2. Other information:

Fat solubility(solvent-oil to be specified)	Not available
etc:	
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Auto activation temperature:	> 350°C

Section 10 Stability and reactivity

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
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10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	Avoid high temperatures, heating, open fire and ignition sources, and prevent the effects of a grinding motion and impact forces that may result in ignition.
10.4 Conditions to avoid:	Incompatible materials. Direct heat, flames or sparks.
10.5 Incompatible materials:	Organic compounds, metal powders, strong acids.
10.6 Hazardous decomposition products:	No hazardous decomposition products are formed if stored under normal conditions. In case of heating or fire, irritating and/or toxic vapours may be released.

Section 11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity:	
ATE_{mix}(oral):	Not available
ATE_{mix}(inhalation):	Not available
ATE_{mix}(Dermal):	Not available
Potassium nitrate (CAS#7757-79-1):	
LD50(Oral, Rat):	> 2000 mg/kg bw
LC50(Inhalation, Rat):	> 0.527 mg/L 4h
LD50(Dermal, Rat):	> 5000 mg/kg bw
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory or skin sensitization:	May cause an allergic skin reaction.
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

11.2 Information on other hazards

Endocrine disrupting properties	The mixture does not contain endocrine disruptor.
Other information	Not applicable

Section 12 Ecological information

12.1 Toxicity:

Potassium nitrate (CAS#7757-79-1):	
Acute (short-term) toxicity:	
LC50(96h, Fish):	> 100 mg/L
EC50(48h, Crustacea):	490 mg/L
EC50(72h, Algae/aquatic plants):	Not available
Chronic (long-term) toxicity:	
NOEC(Fish):	157 mg/L, 32d
NOEC(Crustacea):	Not available
EC50(Algae/aquatic plants):	Not available

12.2 Persistence and degradability:	Partially inorganic and presumed to be partially biodegradable over the long-term.
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12.3 Bioaccumulative potential:

Bioaccumulation in organisms is not expected.

12.4 Mobility in soil:

Low solubility in water.

12.5 Results of PBT and vPvB assessment:

The mixture does not contain PBT / vPvB substance.

12.6 Endocrine disrupting properties:

The mixture does not contain endocrine disruptor.

When released in an aquatic environment damage can be caused by an increased pH.

Ozone Depletion Potential (ODP) = 0.

12.7 Other adverse effects:

Global Warming Potential (GWP) = 0

12.8 Additional information

Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods:

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

Section 14 Transport information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
14. 1 UN number or ID number	Not regulated	Not regulated	Not regulated	Not regulated
14.2 UN Proper shipping name	Not regulated	Not regulated	Not regulated	Not regulated
14.3 Transport hazard Class(es)	Not regulated	Not regulated	Not regulated	Not regulated
14.4 Packing group	Not regulated	Not regulated	Not regulated	Not regulated
14.5 Environmental hazards	No	No	No	No
14.6 Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
14.7 Maritime transport in bulk according to IMO instruments	Not regulated	Not regulated	Not regulated	Not regulated

Section 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**Relevant information regarding authorization:**

Not applicable.

Relevant information regarding restriction:

Not applicable.

Other EU regulations:

Employment restrictions concerning young person must be observed. For

Other National regulations:

15.2 Chemical safety assessment

use only by technically qualified individuals.

Not applicable

YES

☐

NO

☒

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2020/878

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation for rail International transportation of Dangerous goods

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

UFI: Unique Formula Identifier

LC50: median lethal concentration

EC50: The effective concentration of substance that causes 50% of the maximum response.

NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008		Classification procedure
Skin Sens. 1	H317	Calculation method
Eye Irrit. 2	H319	Calculation method

16.5 Relevant H-statements (number and full text):

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H412: Harmful to aquatic life with long lasting effects.

16.6 Training instructions:

Not applicable.

16.7 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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