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编制报告

DRAW UP REPORT

编号 (No): 37000010202109193

日期 (Date): 2020-10-27

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样品名称	中文名称	锅炉除焦剂	
	英文名称	BOILER DECOKING AGENT	
委托单位	北京科林佰德环保有限公司		
生产单位	北京科林佰德环保有限公司		
委托项目	安全数据单（中英文）编制		
样品组分 （企业申报）	硼酸含量：8.5%；硝酸铝含量：6.3%；硝酸钾含量：2%；硝酸铜含量：2%；硝酸镁含量：1.4%；水含量：79.8%。		
编制依据	联合国《关于危险货物运输的建议书 规章范本》（第二十一修订版） 联合国《全球化学品统一分类和标签制度》（第八修订版）		
编制地点	青岛市黄岛区黄河东路 99 号	委托日期	2020-10-14

结 论

根据客户委托要求，按照联合国《关于危险货物运输的建议书·规章范本》和《全球化学品统一分类和标签制度》的相关规定进行了安全数据单的编制，中文样本见附件1，英文样本见附件2。

授权签字人：

印章：



签发日期：2020-10-27

注：1.无实验室盖章，此报告无效。流水号：5025。

2.本报告部分复印无效。



化学品安全数据单

一、标识

全球统一制度产品标识符: 锅炉除焦剂/ BOILER DECOKING AGENT。
其它标识办法: /
化学品使用建议和使用限制: /
供货商的详细情况: 北京科林佰德环保有限公司。
紧急电话号码: /

二、危险标识

物质或混合物的分类:
皮肤腐蚀/刺激类别 2,
严重眼损伤/眼刺激类别 2,
呼吸敏化类别 1,
生殖毒性类别 1B,
特定目标器官毒性——单次接触类别 2 (经口, 心血管系统),
特定目标器官毒性——重复接触类别 2 (吸入),
危害水生环境(急性)类别 2,
危害水生环境(慢性)类别 3。
全球统一制度标签要素, 包括防范说明:
符号:

信号词: 危险。
危险说明: 造成皮肤刺激。造成严重眼刺激。吸入可导致过敏、哮喘症状或呼吸困难。可能对生育能力或胎儿造成伤害。可能对器官造成损害 (经口, 心血管系统)。长期或重复接触可能对器官造成伤害 (吸入)。对水生生物有毒。对水生生物有害并具有长期持续影响。
防范说明:
预防:
使用前取得、阅读并遵循所有安全说明书。不要吸入粉尘/烟/气体/气雾/蒸气/喷雾。作业后彻底清洗。使用本产品时不要进食、饮水或吸烟。避免释放到环境中。戴防护手套/穿防护服/戴防护眼罩/戴防护面具/听力保护装置。[在通风不足的情况下]戴呼吸防护装置。
应对:
如皮肤沾染: 用水充分清洗。专门治疗 (见下文)。如出现皮肤刺激: 请就医。脱掉沾染的衣服, 清洗后方可重新使用。如误吸入: 将人转移到空气新鲜处, 保持呼吸舒适体位。如出现呼吸系统病症: 立即紧急就医。如进入眼睛: 用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出, 取出隐形眼镜。继续冲洗。如眼刺激持续: 请就医。如已接触或有疑虑: 立即紧急就医。如感不适, 请就医。
存放:
存放处须加锁。
处置:
按照相关规定处置内装物和货箱。

不导致分类的其他危险: /

三、组成/成分信息

化学名称	化学文摘社编号 (CAS No.)	成分 (由送检企业提供)
硼酸	10043-35-3	8.5%
硝酸铝	13473-90-0	6.3%
硝酸钾	7757-79-1	2%
硝酸铜	3251-23-8	2%
硝酸镁	10377-60-3	1.4%
水	7732-18-5	79.8%

四、急救措施

不同暴露途径的急救方法
吸入: 迅速脱离现场至空气新鲜处。保持呼吸道通畅。如呼吸困难, 给输氧。如呼吸停止, 立即进行人工呼吸。就医。
皮肤接触: 脱去污染的衣着, 用大量流动清水冲洗。
眼睛接触: 立即提起眼睑, 用大量流动清水彻底冲洗至少 15 分钟。就医。
摄入: 漱口, 就医。
最重要的急性和延迟症状/效应: /
必要时注明立即就医及所需的特殊治疗: /

五、消防措施

适当的灭火剂: 可用干粉、泡沫、水雾等灭火。
化学品产生的具体危险: 在高温高热下燃烧分解, 放出有毒的烟气。
消防人员的特殊防护行动: 消防人员必须配戴空气呼吸器、消防衣及防护手套, 在上风向灭火。灭火时尽可能将容器从火场移至空旷处。然后根据着火原因选择适当灭火剂灭火。

六、意外释放措施

人身防范、保护设备和应急程序: 建议应急处理人员戴防护口罩, 穿消防工作服。不要直接接触泄漏物。
环境防范措施: 隔离泄漏污染区, 限制出入。
抑制和清洁的方法和材料: 小量泄漏: 用砂土或其它惰性材料吸附或吸收。切勿使产品进入下水道等限制性区域。大量泄漏: 构筑围堤或挖坑收容。用泵转移至槽车或专用收集器内, 回收或运至废物处理场所处置。

七、搬运和存储

安全搬运的防范措施: 密闭操作, 局部排风。操作人员必须经过专门培训, 严格遵守操作规程。建议操作人员佩戴防护口罩, 穿普通防护服, 戴橡胶手套。搬运时轻装轻卸, 防止包装破损。配备泄漏应急处理设备。倒空的容器可能残留有害物。
安全存储的条件, 包括任何不相容性: 储存于阴凉、干燥、通风良好的库房。远离火种、热源。防止阳光直射。包装必须密封, 切勿受潮。应与氧化剂、易(可)燃物等分开存放, 切忌混储。储区应备有合适的材料收容泄漏物。

八、接触控制/人身保护

控制参数: /

适当的工程控制: 严加密闭, 提供充分的局部排风。

个人防护措施

防护眼罩/面具: 佩戴防护口罩。

皮肤防护: 穿普通防护服。

呼吸系统防护: 紧急事态抢救或撤离时, 应该佩戴空气呼吸器。

高温危险: /

九、物理和化学特性

外观 (物理状态、颜色等)	蓝色液体。
气味	/
气味阈值	/
pH 值	/
熔点/凝固点	/
初始沸点和沸腾范围	/
闪点	/
蒸发速率	/
易燃性 (固体、气体)	/
上下易燃极限或爆炸极限	/
蒸气压力	/
蒸气密度	/
相对密度	/
可溶性	/
分配系数: 正辛醇/水	/
自动点火温度	/
分解温度	/
粘度	/

十、稳定性和反应性

反应性: /

化学稳定性: 在常温下稳定。

危险反应的可能性: /

应避免的条件: 高温、火星、静电。

不相容材料: 易燃或可燃物、还原剂。

危险分解产物: 氮氧化物等。

十一、毒理学信息

暴露途径: 吸入、食入、经皮吸收、眼睛接触。

有关物理、化学和毒理学特点的症状: /

急性毒性效应: 吸入后会导致咳嗽、咽喉刺激。皮肤接触会导致皮肤发红、刺激。眼睛接触后会导致发红、刺激。食入会导致恶心、呕吐、腹痛等症状。

慢性毒性或长期毒性效应: /

毒性的数值度量 (如急性毒性估计值):

硼酸:

经口 (鼠) LD50: 2500 mg/kg

硝酸铝:

经口 (鼠) LD50: 204 mg/kg
硝酸钾:
经口 (鼠) LD50: >2000 mg/kg
经口皮 (野兔) LD50: 1901 mg/kg
硝酸铜:
经口 (鼠) LD50: 940 mg/kg
硝酸镁:
经口 (鼠) LD50: >2000 mg/kg

十二、生态学信息

毒性:

硼酸:

终点	测试持续时间 (小时)	种类	价值
LC50	96	鱼	74mg/L
EC50	48	甲壳纲动物	230mg/L
EC50	96	藻类或其他水生植物	15.4mg/L
NOEC	576	鱼	0.001mg/L

硝酸铝:

终点	测试持续时间 (小时)	种类	价值
LC50	96	鱼	>0.105mg/L
EC50	48	甲壳纲动物	0.33mg/L
EC50	72	藻类或其他水生植物	0.075mg/L
NOEC	1440	鱼	0.013mg/L

硝酸钾:

终点	测试持续时间 (小时)	种类	价值
LC50	96	鱼	1-378mg/L
EC50	48	甲壳纲动物	490mg/L
NOEC	720	鱼	58mg/L

硝酸铜:

终点	测试持续时间 (小时)	种类	价值
LC50	96	鱼	0.001-0.09mg/L
EC50	48	甲壳纲动物	0.001-0.213mg/L
EC50	72	藻类或其他水生植物	0.0165mg/L
NOEC	768	鱼	0.0048mg/L

硝酸镁:

终点	测试持续时间 (小时)	种类	价值
LC50	96	鱼	1-378mg/L
EC50	48	甲壳纲动物	490mg/L
NOEC	720	鱼	58mg/L

持久性和降解性:

成分	持久性: 水/土壤	持久性: 空气
硼酸	低	低
硝酸铝	低	低
硝酸钾	低	低

生物累积潜力:

成分	生物积累
硼酸	低 (BCF = 0)
硝酸铝	低 (LogKOW = 0.209)
硝酸钾	低 (LogKOW = 0.209)

在土壤中的流动性:

成分	迁移性
硼酸	低 (KOC = 35.04)
硝酸铝	低 (KOC = 14.3)
硝酸钾	低 (KOC = 14.3)

其它有害效应: /

十三、处置考虑

处置方法: 用安全掩埋法处置。破损容器禁止重新使用, 要在规定场所掩埋。

十四、运输信息

联合国编号: /

联合国正式运输名称: /

运输危险分类: /

包装类别 (如果适用): /

环境危险: /

用户的特殊防范措施: /

十五、管理信息

国内化学品安全法规: 本化学品安全技术说明书遵照了以下相关国家标准: GB/T 16483-2008、GB 13690-2009、GB 18218-2018、GB 15258-2009、GB 6944-2012、GB 190-2009、GB/T 191-2008、GB 12268-2012、GB/T 15098-2008、GBZ 2.1-2019、GBZ 2.2-2007 以及相关法规:《铁路危险货物运输管理规则》、《危险化学品安全管理条例》。

十六、其它信息

参考文献	联合国《关于危险货物运输的建议书·规章范本》 联合国《全球化学品统一分类和标签制度》
制表日期	2020-10-27

注 1: 当产品为含有两种以上危险物质的混合物时, 应依据其混合后的危险性, 制作安全数据单。

注 2: 制造商/供应商应根据实际情况确保安全数据单所含信息的正确性, 并适时更新。

注 3: 如由于产品特性而不存在或不可得某些信息时 (如固体不存在沸点), 应在表格中以“/”标识。

Chemical Safety Data Sheet

Section 1 IDENTIFICATION

GHS Product identifier: BOILER DECOKING AGENT.**Other means of identification:** /**Recommended use of the chemical and restrictions on use:** /**Supplier's details:** /**Emergency phone number:** /

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Respiratory sensitizer Category 1

Reproductive toxicity Category 1B

Specific target organ toxicity – single exposure Category 2 (Oral, Cardiovascular system)

Specific target organ toxicity – repeated exposure Category 2 (Inhalation)

Hazardous to the aquatic environment, short-term (Acute) Category 2

Hazardous to the aquatic environment, long-term (Chronic) Category 3

GHS Label elements, including precautionary statements:

Symbol:

Signal word: **Danger**

Hazard statement(s): Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May damage fertility or the unborn child. May cause damage to organs (Oral, Cardiovascular system). May cause damage to organs through prolonged or repeated exposure (Inhalation). Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention:

Obtain, read and follow all safety instructions before use. Do not breathe dust/fume/gas/mist/vapours/spray. Wash ... thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. [In case of inadequate ventilation] wear respiratory protection.

Response:

IF ON SKIN: Wash with plenty of water. Specific treatment (see below). If skin irritation occurs: Get medical help. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get emergency medical help immediately. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help. IF exposed or concerned: Get emergency medical help immediately. Get medical help if you feel unwell.

Storage:

Store locked up.

Disposal:

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

Other hazards which do not result in classification: /

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Boracic acid	10043-35-3	8.5%
Aluminum nitrate	13473-90-0	6.3%
Potassium nitrate	7757-79-1	2%
Cupric nitrate	3251-23-8	2%
Magnesium nitrate	10377-60-3	1.4%
Water	7732-18-5	79.8%

Section 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Remove contaminated clothing and rinse with plenty of running water.

In case of eye contact: Rinse thoroughly with plenty of running water for at least 15 minutes and consult a physician.

If ingestion: Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

Section 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Use foam, dry powder, water spray, etc.

Special hazards arising from the chemical: This material may decompose and burn at high temperature and fire and release toxic fumes.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers. In case of fire in the surroundings, use appropriate extinguishing media.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: It is recommended that emergency personnel wear protective masks and fire protective overalls. Do not touch the spill directly.

Environmental precautions: Isolate contaminated areas and restrict access.

Methods and materials for containment and cleaning up: Small amount of leakage: adsorption with sand or other inert materials. Do not allow products to enter restricted areas such as sewers. A large amount of leakage: building a dike or digging a pit to contain. Transfer to a tank truck or special collector with a pump and transport to a waste disposal site for disposal.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear protective masks,

normal protective clothing and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well-ventilated warehouse. Keep away from fire and heat. Protect from direct sunlight. The package should be sealed and not exposed to moisture. It should be stored separately from oxidants, flammable materials, etc., and should not be mixed. The storage area should be provided with suitable materials to contain spills.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: /

Appropriate engineering controls: Close strictly and provide sufficient local exhaust.

Individual protection measures

Eye/face protection: Wear a protective mask.

Skin protection: Wear normal protective clothing.

Respiratory protection: Air respirators should be worn during emergency rescue or evacuation.

Thermal hazards: /

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour etc)	Blue liquid.
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	/
Initial boiling point and boiling range	/
Flash point	/
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	/
Vapour pressure	/
Vapour density	/
Relative density	/
Solubility(ies)	/
Partition coefficient: n-octanol/water	/
Auto-ignition temperature	/
Decomposition temperature	/
Viscosity	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: This material is stable in normal temperature.

Possibility of hazardous reactions: /

Conditions to avoid: Spark, static electricity and high temperature.

Incompatible materials: Flammable materials and reducer.

Hazardous decomposition products: Nitrogen oxides.

Section 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, swallowed, skin, eyes.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects: Accidental ingestion of the material may be harmful and cause cough and throat irritation. Oral intake may cause bellyache, nausea, vomit and other symptoms. This material may produce skin and eyes irritation.

Chronic health effects: /

Numerical measures of toxicity (such as acute toxicity estimates):

Boracic acid:

LD50(Oral, rat): 2500 mg/kg

Aluminum nitrate:

LD50(Oral, rat): 204 mg/kg

Potassium nitrate:

LD50(Oral, rat): >2000 mg/kg

LD50(dermal, rabbit): 1901 mg/kg

Cupric nitrate:

LD50(Oral, rat): 940 mg/kg

Magnesium nitrate:

LD50(Oral, rat): >2000 mg/kg

Section 12 ECOLOGICAL INFORMATION

Toxicity:

Boracic acid:

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	74mg/L
EC50	48	Crustacea	230mg/L
EC50	96	Algae or other aquatic plants	15.4mg/L
NOEC	576	Fish	0.001mg/L

Aluminum nitrate:

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	>0.105mg/L
EC50	48	Crustacea	0.33mg/L
EC50	72	Algae or other aquatic plants	0.075mg/L
NOEC	1440	Fish	0.013mg/L

Potassium nitrate:

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	1-378mg/L
EC50	48	Crustacea	490mg/L
NOEC	720	Fish	58mg/L

Cupric nitrate:

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	0.001-0.09mg/L
EC50	48	Crustacea	0.001-0.213mg/L
EC50	72	Algae or other aquatic plants	0.0165mg/L

NOEC	768	Fish	0.0048mg/L
Magnesium nitrate:			
Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	1-378mg/L
EC50	48	Crustacea	490mg/L
NOEC	720	Fish	58mg/L
Persistence and degradability:			
Ingredient	Persistence: Water/Soil	Persistence: Air	
Boric acid	Low	Low	
Aluminum nitrate	Low	Low	
Potassium nitrate	Low	Low	
Bioaccumulative potential:			
Ingredient	Bioaccumulation		
Boric acid	Low (BCF = 0)		
Aluminum nitrate	Low (LogKOW = 0.209)		
Potassium nitrate	Low (LogKOW = 0.209)		
Mobility in soil:			
Ingredient	Mobility		
Boric acid	Low (KOC = 35.04)		
Aluminum nitrate	Low (KOC = 14.3)		
Potassium nitrate	Low (KOC = 14.3)		
Other adverse effects: /			

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

Section 14 TRANSPORT INFORMATION

UN number: /

UN proper shipping name: /

Transport hazard class(es): /

Packing group, if applicable: /

Environmental hazards: /

Special precautions for user: /

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012、GB/T 15098-2008、GBZ 2.1-2019、GBZ 2.2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.

Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations
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	UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	27-October-2020

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer/supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.