



中国认可
检测
TESTING
CNAS L1474

郑州海关技术中心
编制报告

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日期 (Date): 2026-08-05 至 2026-08-11
页码 (Page): 1 / 1

样品名称	中文名称	稀硝酸 68%
	英文名称	Dilute nitric acid(68%)
委托单位	河南永昌硝基肥有限公司	
生产单位	河南永昌硝基肥有限公司	
委托项目	安全数据单编制-中英文	
样品组分 (企业申报)	硝酸 68%，水 32%	
编制依据	联合国《全球化学品统一分类和标签制度》(第十一修订版)	
安全数据单编制-中英文（见附件）		

授权签字人:

REDACTED

签发日期:

2026-08-11

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声明: 1、除非另有说明,本报告中的检测结果仅适用于收到的样品,本单...递等过程对检测结果造成的影响。2.本报告无技术中心“检验检测专用章”无效。3、未经本单位书面同意,本报告不得部分复印或部分引述。4、本单位不承担证实送检单位所提供信息的准确性、真实性和完整性的责任。5.委托单位对报告内容如有异议,可于出具报告之日起十五个工作日内向本单位提出书面复检要求,逾期不予受理。

JSZX-TR07-7.8N3

安全数据单 (SDS)

稀硝酸 68%

版本号 : V2.0.0.1

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编制日期 : 2026/08/11

修订日期 : -

*依据《全球化学品统一分类和标签制度》(GHS)第十一修订版编制

第 1 部分 : 标识

产品标识

产品中文名称	稀硝酸 68%
产品英文名称	Dilute nitric acid(68%)
产品编号	REDACTED
CAS No.	7697-37-2
EC No.	231-714-2
分子式	HNO ₃

产品的推荐用途和限制用途

产品的推荐用途	请咨询生产商。
产品的限制用途	请咨询生产商。

供应商的详细情况

企业名称	河南永昌硝基肥有限公司
企业地址	REDACTED
邮编	
联系电话	
传真	
电子邮箱	

紧急电话号码

紧急电话号码	REDACTED
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第 2 部分 : 危险标识

GHS 危险性类别

氧化性液体	类别	REDACTED
皮肤腐蚀/刺激	类别	
严重眼损伤/眼刺激	类别	
急性毒性-吸入	类别	

GHS 标签要素

象形图	
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信号词 **危险****危险性说明**

H272	可能加剧燃烧；氧化剂
H314	造成严重皮肤灼伤和眼损伤
H318	造成严重眼损伤
H331	吸入可中毒

防范说明

◆ 预防措施

P210	远离热源、热表面、火花、明火以及其他点火源。禁止吸烟。
P220	远离服装和其他可燃材料。
P260	不要吸入气体/烟雾/蒸气/喷雾。
P264	作业后彻底清洗手部和其它身体相关部位。
P271	只能在室外或充分通风的情况下使用。
P280	戴防护手套/穿防护服/戴防护眼罩/戴防护面具/戴听力保护装置。
P284	在通风不足的情况下戴呼吸防护装置。
P264+P265	作业后彻底清洗手部和其它身体相关部位。勿触碰眼睛。

◆ 事故响应

P316	立即紧急就医。
P317	请就医。
P320	必须立即接受专门治疗（见本标签和安全数据单上的信息）。
P321	专门治疗（见本标签和安全数据单上的信息）。
P363	沾染的衣服清洗后方可重新使用。
P304+P340	如误吸入：将人转移到空气新鲜处，保持呼吸舒适的体位。
P370+P378	轻微火灾：用二氧化碳、干粉、干砂或抗溶泡沫灭火剂灭火；重大火灾：用水幕、喷雾或抗溶泡沫灭火剂灭火；槽罐、卡车或拖车货物着火：灭火时要与火源保持尽可能大的距离或用遥控水枪或水炮。用大量水来冷却罐体直到火势被扑灭。不要让水进入容器。
P301+P330+P331	如误吞咽：漱口。不得诱导呕吐。
P302+P361+P354	如皮肤沾染，立即脱掉所有沾染的衣物。立即用水冲洗几分钟。
P305+P354+P338	如进入眼睛：立即用水冲洗几分钟。如戴隐形眼镜并可方便地取出，取出隐形眼镜。继续冲洗。

◆ 安全储存

P405	存放处须加锁。
P403+P233	存放于通风良好处。保持容器密闭。

◆ 废弃处置

P501	按照地方/区域/国家/国际规章处置内装物/容器。
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危害描述

◆ 物理和化学危害

	跟可燃物质接触可能
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◆ 健康危害

吸入	灼烧感，咳嗽，呼吸，症状可能推迟显现。
食入	咽喉疼痛。腹部疼痛。咽喉和胸腔灼烧感。休克或虚脱。呕吐。
皮肤接触	严重皮肤烧伤。疼痛。黄色斑渍。

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眼睛 发红。疼痛。烧伤。

◆ 环境危害

请参阅 SDS 第十二部分。

第 3 部分：组成/成分信息

物质/混合物

物质

组分	CAS No.	EC No.	含量范围（质量分数,%）
硝酸	7697-37-2	231-714-2	68
水	7732-18-5	231-791-2	32

第 4 部分：急救措施

急救措施描述

一般性建议	急救措施通常是需要的，请将本 SDS 出示给到达现场的医生。
眼睛接触	先用大量水冲洗（如可能易行，摘除隐形眼镜）。立即给予医疗护理。
皮肤接触	脱去污染的衣服。用大量水冲洗皮肤或淋浴。给予医疗护理。
食入	不要催吐。饮用 1 杯或 2 杯水。休息。给予医疗护理。
吸入	新鲜空气，休息，半直立位，必要时进行人工呼吸，立即给予医疗护理。
急救人员的防护	确保医护人员了解产品的危害特性，并采取自身防护措施，以保护自己和防止污染传播。

最重要的急性和延迟症状/效应

- 有限的证据表明反复或长期职业接触可能会产生涉及器官或生化系统累积性的健康影响。

紧急医疗处理和特殊处理的说明

- 根据出现的症状进行针对性处理。
- 注意症状可能会出现延迟。

第 5 部分：消防措施

灭火介质

适当的灭火介质	轻微火灾：用二氧化碳、干粉、干砂或抗溶泡沫灭火剂灭火；重大火灾：用水幕、喷水雾或抗溶泡沫灭火剂灭火；槽罐、卡车或拖车货物着火：灭火时要与火源保持尽可能大的距离或用遥控水枪或水炮。用大量水来冷却罐体直到火势被扑灭。不要让水进入容器。
不适当的灭火介质	重大火灾：避免用直流水枪直接喷向货物。

源于此物质或混合物的特别危害

- 火灾时可能产生有害的可燃气体或蒸气。
- 受热或接触火焰可能会产生膨胀或爆炸性分解。
- 不燃烧，但会增强火势。
- 与木材、纸张、油类或金属粉末等可燃物质接触
- 因释放氧气有助燃效果。
- 物质含有氧化剂/有机过氧化物，可通过供氧使
- 灭火行动对已发生的火灾可能无效。
- 遇火会产生刺激性、毒性或腐蚀性的气体。

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消防人员的特殊保护设备和防备措施

1	灭火时，应佩戴呼吸面具（符合 MSHA/NIOSH 要求的或相当的）并穿上全身防护服。
2	在安全距离处、有充足防护的情况下灭火。
3	防止消防废水污染地表和地下水系统。

第 6 部分：意外释放措施

人身防护、保护设备和应急程序

1	保证充分的通风。清除所有点火源。采取防静电措施。
2	迅速将人员撤离到安全区域，远离泄漏区域并处于上风方向。
3	使用个人防护装备，不要吸入气体/烟雾/蒸气/喷雾。
4	确保可燃物（木头、纸、油等）远离泄漏物。
5	无火灾状况下的溢漏和泄漏应穿着蒸气防护服，且完全密封。
6	不要触摸或穿越泄漏物。
7	不要触摸破损的容器或泄漏物质除非穿着合适的防护服。

环境防备措施

1	在确保安全的情况下，采取措施防止进一步的泄漏或溢出。
2	避免排放到周围环境中。

泄漏化学品的收容、清除方法及所使用的处置材料

1	穿上适当的防护服前严禁接触破裂的容器和泄漏物。
2	清除所有点火源，并采用防火花工具和防爆设备。
3	建议应急处理人员戴正压自给式呼吸器，穿防静电服。
4	少量泄漏时，使用洁净无火花工具收集吸收材料。
5	大量泄漏时，构筑围堤或挖坑收容。用泡沫覆盖，减少蒸发。喷水雾能减少蒸发，但不能降低泄漏物在限制性空间内的易燃性。
6	使用洁净的无火花工具收集吸收材料。
7	用干土、干砂或其它不燃物质覆盖，再加盖塑料薄膜，尽可能降低扩散范围或与雨水接触。
8	喷水雾能减少蒸发，但不能降低泄漏物在受限制空间内的易燃性。
9	禁止接触或跨越泄漏物。
10	用抗溶性泡沫覆盖，减少蒸发。
11	建议应急处理人员戴正压自给式呼吸器，穿防腐服。
12	用耐腐蚀泵转移至槽车或专用收集器内。

第 7 部分：搬运和存储

安全搬运的防备措施

1	在通风良好处进行操作。
2	穿戴合适的个人防护用具。
3	避免接触皮肤和进入眼睛。
4	远离热源、火花、明火和热表面。

安全储存的条件，包括任何不

1	保持容器密闭。
2	储存在干燥、阴凉和通风处。
3	远离热源、火花、明火和热表面。

4	存储于远离不相容材料和食品容器的地方。
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第 8 部分：接触控制/个体防护

控制参数

职业接触限值（国际）					
组分	国家/地区	职业接触限值（8h）		职业接触限值（短时间）	
		ppm	mg/m³	ppm	mg/m³
硝酸	澳大利亚	2	5.2	4	10
	加拿大-安大略省	2	-	4	-
	加拿大-魁北克	2	5.2	4	10
	欧盟	-	-	1	2.6
	法国	-	-	1	2.6
	德国（AGS）	-	-	1	2.6

生物限值	
生物限值	无相关规定

监测方法	
1	EN 14042 工作场所空气 用于评估暴露于化学或生物试剂的程序指南。
2	GBZ/T 300 系列标准 工作场所空气有毒物质测定。

工程控制

1	保持充分的通风，特别在封闭区内。
2	确保在工作场所附近有洗眼和淋浴设施。
3	设置应急撤离通道和必要的泄险区。
4	根据良好的工业卫生和安全规范进行操作。
5	使用防爆电器、通风、照明等设备。

个人防护装备

总要求	    
眼睛防护	必须佩戴合适的防腐蚀护目镜。
手部防护	必须戴耐酸碱的化学防护手套。
呼吸系统防护	必须佩戴合适的防尘防毒面具。
皮肤和身体防护	必须

第 9 部分：物理和化学

理化特性

物理状态	无色
颜色	无色
气味	无资料
气味临界值	无资料

pH 值	< 1
熔点/凝固点(°C)	-41.6
初沸点和沸程(°C)	121
闪点(闭杯, °C)	无资料
蒸发速率	无资料
易燃性	无资料
爆炸上限/下限%(v/v)	上限：无资料；下限：无资料
蒸气压	6.4kPa (20°C)
(相对)蒸气密度(空气=1)	2.2
相对密度(水=1)	1.4
溶解性(mg/L)	500000mg/L (20 °C)
辛醇/水分配系数	-0.21
自燃温度(°C)	无资料
分解温度(°C)	无资料
运动黏度	无资料
颗粒特征	不适用

第 10 部分：稳定性和反应性

稳定性 and 反应性

反应性	与不相容物质接触可发生分解或其它化学反应。
化学稳定性	在正确的使用和存储条件下是稳定的。
危害性反应的可能性	与碱金属、钠、钙等活泼金属接触发生反应而放出氢气。
应避免的条件	不相容物质，热、火焰和火花。
不相容材料	碱金属、钠、钙等活泼金属、卤素单质、金属氧化物、非金属氧化物、酰卤和金属磷化物。
具有危害性的分解产物	在正常的储存和使用条件下，不会产生危险的分解产物。

第 11 部分：毒理学信息

急性毒性

组分	LD ₅₀ (经口)	LD ₅₀ (经皮)	LC ₅₀ (吸入, 4h)
硝酸	无资料	无资料	2.65mg/L (大鼠)

致癌性

组分	IARC 致癌物分类清单	NTP 致癌物报告
硝酸	未分类	未列入
水	未分类	未列入

其他信息

皮肤腐蚀/刺激	造成严重皮肤灼伤和刺激
严重眼损伤/眼刺激	造成严重眼损伤 (类别 1)
皮肤致敏	根据现有资料，不符合分类标准
呼吸致敏	根据现有资料，不符合分类标准

生殖毒性	根据现有资料，不符合分类标准
特定目标器官毒性-单次接触	根据现有资料，不符合分类标准
特定目标器官毒性-反复接触	根据现有资料，不符合分类标准
吸入危害	根据现有资料，不符合分类标准
生殖细胞致突变性	根据现有资料，不符合分类标准

第 12 部分：生态学信息

急性水生毒性

急性水生毒性	无资料
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慢性水生毒性

慢性水生毒性	无资料
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持久性和降解性

持久性和降解性	无资料
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生物富集或生物累积性

生物富集或生物累积性	无资料
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土壤中的迁移性

土壤中的迁移性	无资料
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PBT 和 vPvB 的结果评价

组分	PBT/vPvB 评价结果 [依据(EC) No 1907/2006 及其修正案 2020/878]
硝酸	不属于 PBT/vPvB
水	不属于 PBT

第 13 部分：处置考虑

废弃处理

废弃化学品	处置之前应参阅国家和地方有关法规。建议用焚烧法处置。
污染包装物	包装物清空后仍可能存在残留物危害，应远离热和火源，如有可能返还给供应商循环使用。
废弃注意事项	请参阅废弃化学品和污染包装物。

第 14 部分：运输信息

标签

运输标签	
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海运危规 (IMDG-CODE)

联合国危险货物编号 (UN No.)	2031
联合国正确运输名称	硝酸，含硝酸不小于 65%，但不大于 70%，发红烟的除外

运输主要危险类别	8
运输次要危险类别	5.1
包装类别	II
海洋污染物（是/否）	否
EmS No.	F-A，S-Q

空运（IATA-DGR）

联合国危险货物编号（UN No.）	2031
联合国正确运输名称	硝酸，发红烟的除外，含硝酸不小于 65%，但不大于 70%
运输主要危险类别	8
运输次要危险类别	5.1
包装类别	II

公路运输（UN-ADR）

联合国危险货物编号（UN No.）	2031
联合国正确运输名称	硝酸，发红烟的除外，含硝酸至少 65%，但不大于 70%
运输主要危险类别	8
运输次要危险类别	5.1
包装类别	II

用户的特别防范护措施

	运输时运输车辆应配备相应品种和数量的消防器材及泄漏应急处理设备。运输前应先检查包装容器是否完整、密封。运输工具上应根据相关运输要求张贴标志、公告。严禁与酸类、易燃物、有机物、还原剂、自燃物品、遇湿易燃物品等混装混运。
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按照海事组织文书运输散货

◆ 依据 MARPOL 附件 II 和 IBC 规则进行散装运输	无资料
◆ 依据 MARPOL 附件 V 和 IMSBC 规则进行散装运输	无资料
◆ 依据 IGC 规则进行散装运输	无资料

第 15 部分：管理信息

国际化学品名录

组分	A	B	C	D	E	F	G	H	I	J	K	L	M
硝酸	√	√	√	√					√	√	√	√	√
水	√	√	√	√					√	√	√	√	√

- [A] 中国现有化学物质名录(IECSC)
[B] 欧盟化学品名录(EC inventory)
[C] 美国有毒物质控制法案名录(TSCA)
[D] 加拿大国内物质名录(DSL)
[E] 新西兰化学品名录(NZIoC)
[F] 菲律宾化学品和化学物质名录(PICCS)
[G] 韩国现有化学物质名录(KECL)

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- 【H】 澳大利亚工业化学品名录(AIIC)
- 【I】 日本现有和新化学物质名录(ENCS)
- 【J】 泰国现有物质名录(TECI)
- 【K】 墨西哥国家化学品名录(INSQ)
- 【L】 俄罗斯现有物质名录(DRAFT)
- 【M】 中国台湾地区既有化学物质名录(TCSI)

国际公约管制物质清单

组分	A	B	C
硝酸	x	x	x
水	x	x	x

- 【A】 《关于消耗臭氧层物质的蒙特利尔议定书》
- 【B】 《关于持久性有机污染物 (POPs) 的斯德哥尔摩公约》
- 【C】 《关于在国际贸易中对某些危险化学品和农药采用事先知情同意程序的鹿特丹公约》

注：
“√” 表示该物质列入法规
“x” 表示暂无资料或未列入法规

第 16 部分：其他信息

修订信息

编制日期	2026/08/11
修订日期	-
修订原因	-

参考文献

- 【1】 国际化学品安全规划署：国际化学品安全卡（ ICSC ），网址：<http://www.ilo.org/dyn/icsc/showcard.home>。
- 【2】 国际癌症研究机构，网址：<http://www.iarc.fr/>。
- 【3】 OECD 全球化学品信息平台，网址：<https://www.echemportal.org/echemportal/>。
- 【4】 美国 CAMEO 化学物质数据库，网址：<http://cameochemicals.noaa.gov/search/simple>。
- 【5】 美国医学图书馆:化学品标识数据库，网址：<http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>。
- 【6】 美国环境保护署：综合危险性信息系统，网址：<http://cfpub.epa.gov/iris/>。
- 【7】 美国交通部：应急响应指南，网址：<http://www.phmsa.dot.gov/hazmat/library/erg>。
- 【8】 德国 GESTIS 有害物质数据库，网址：<http://gestis-en.itrust.de/>。

缩略语

CAS	化学文摘号	UN	联合国
PC-STEL	短时间接触容许浓度	OECD	世界经济合作与发展组织
PC-TWA	时间加权平均容许浓度	IMDG-CODE	国际海运危险货物规则
MAC	最高容许浓度	IARC	国际癌症研究机构
DNEL	衍生的无影响水平	ICAO	国际民航组
PNEC	预测的无效应浓度	IATA	国际航空运
NOEC	无显见效应浓度	ACGIH	美国工业卫
LC ₅₀	50%致死浓度	NFPA	美国消防协
LD ₅₀	50%致死剂量	NTP	国家毒理学
EC ₆₀	引起 50%反应的有效物质浓度	PBT	持久性，生
EC _x	产生 x%反应的浓度	vPvB	高持久性，
Pow	辛醇/水分配系数	CMR	致癌、致畸
BCF	生物富集系数	RPE	呼吸防护设
ED	内分泌干扰物	G1	对人致癌
G2A	对人可能致癌	G2B	对人可疑致癌
G3	尚不能分类为对人致癌	G4	可能对人无致癌性

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免责声明

本安全数据单格式符合联合国 GHS 制度第十一修订版要求，数据来源于国际权威数据库和企业提交的数据，其它的信息是基于本中心目前所掌握的知识。我们尽量保证其中所有信息的正确性，但由于信息来源的多样性以及本中心所掌握知识的局限性，本文件仅供使用者参考。安全数据单的使用者应对其使用的合理性做出判断。我们对该产品操作、存储、使用或处置等环节产生的任何损害，不承担责任。

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FOR DISPLAY ONLY

Safety Data Sheet

Dilute nitric acid(68%)

Version : V2.0.0.1

REDACTED

Creation Date : 2026/08/11

Revision Date : -

*According to Globally Harmonized System of Classification and Labelling of Chemicals(GHS), 11th revised edition

Part 1: Identification

Product identifier

Product Name	Dilute nitric acid(68%)
Cat No.	REDACTED
CAS No.	7697-37-2
EC No.	231-714-2
Molecular Formula	HNO ₃

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier

Name of the company	Henan Yongchang Nitro Fertilizer Co.,Ltd
Address of the company	REDACTED
Post code	
Telephone number	
Fax number	
E-mail address	

Emergency phone number

Emergency phone number	REDACTED
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Part 2: Hazard(s) identification

Hazard classification according to GHS

Oxidizing Liquids	Category 3
Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Irritation	Category 1
Acute Toxicity - Inhalation	Category 3

GHS Label elements

Hazard pictograms		REDACTED
Signal word	Danger	

Hazard statements

H272	May intensify fire; oxidizer
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled

Precautionary statements

◆ Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P260	Do not breathe gas/mist/vapour/spray.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P271	Use only outdoors or with adequate ventilation.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	In case of inadequate ventilation wear respiratory protection.
P264+P265	Wash hands and other parts of the body (if related) thoroughly after handling. Do not touch eyes.

◆ Response

P316	Get emergency medical help immediately.
P317	Get medical help.
P320	Specific treatment is urgent (see information on this label and safety data sheet).
P321	Specific treatment (see information on this label and safety data sheet).
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378	Small fire: CO ₂ , dry chemical, dry sand, alcohol-resistant foam; Large fire: water spray, fog or alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P361+P354	IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

◆ Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep away from heat.

◆ Disposal

P501	Dispose of contents/container in accordance with applicable local/national/international regulations.
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Hazard description

◆ Physical and chemical hazards

	Contact with combustible material may cause fire.
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◆ Health hazards

Inhaled	Burning sensation. Cough. Laboured breathing. Shortness of breath. Sore throat. Symptoms may be delayed.
Ingestion	Sore throat. Abdominal pain. Burning sensation in the throat and chest. Shock or collapse. Vomiting.
Skin Contact	Serious skin burns. Pain. Yellow discolouration.
Eye	Redness. Pain. Burns.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.
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Part 3: Composition/information on ingredients

Substance/mixture

	Substance
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Component	CAS No.	EC No.	Weight %content(or range)
Nitric acid	7697-37-2	231-714-2	68
Water	7732-18-5	231-791-2	32

Part 4: First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water (remove contact lenses if easily possible). Refer immediately for medical attention.
Skin contact	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Ingestion	Do NOT induce vomiting. Give one or two glasses of water to drink. Rest. Refer for medical attention.
Inhalation	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer immediately for medical attention.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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Indication of any immediate medical attention and first aid needed

1	Treat symptomatically.
2	Symptoms may be delayed.

Part 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Small fire: CO ₂ , dry chemical, dry sand, alcohol-resistant foam; Large fire: water spray, fog or alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices
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	or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers.
Unsuitable extinguishing media	Large fire: avoid aiming straight or solid streams directly onto the product.

Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in fire.
3	Will not burn but increases intensity of fire.
4	Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.
5	Has a fire-promoting effect due to release of oxygen.
6	The material may provide sufficient oxygen to make the fire fierce and self sustaining.
7	Smothering action may not be effective for established fire.
8	Fire may produce irritating, poisonous or corrosive gases.

Special protective equipment and precautions for fire-fighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent firefighting wastewater from contaminating surface water or the ground water system.

Part 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment, do not breathe gas/mist/vapour/spray.
4	Keep combustibles (wood, paper, oil, etc.) away from spilled material.
5	Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
6	Do not touch or walk through spilled material.
7	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	Do not touch broken containers and spills before putting on appropriate protective clothing.
2	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
3	It is recommended that emergency personnel wear positive pressure breathing apparatus and wear anti-static clothing.
4	In case of small amount of spillage, use clean non sparking tools to collect spilled material into sealed containers.
5	In case of large amount of spillage, construct cofferdam or dig a trench to contain the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation and reduce the flammability of the leakage in the restricted space.
6	Collect absorbent material using a clean, non-sparking tool.
7	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

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8	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
9	Do not touch or cross spills.
10	Cover with anti-solvent foam to reduce evaporation.
11	It is recommended that emergency personnel wear a self-contained breathing apparatus with positive pressure and wear anti-corrosion clothing.
12	Transfer to a tank truck or special collector with a corrosion-resistant pump.

Part 7: Handling and storage

Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Part 8: Exposure controls/personal protection

Control parameters

Occupational exposure limit values (International)

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
Nitric acid	Australia	2	5.2	4	10
	Canada - Ontario	2	-	4	-
	Canada - Québec	2	5.2	4	10
	European Union	-	-	1	2.6
	France	-	-	1	2.6
	Germany (AGS)	-	-	1	2.6

Biological limit values

Biological limit values	No relevant regulations
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Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application of the method for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 and GBZ/T 160 series standard Determination of chemical agents in workplace air.

Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Set up emergency exit and necessary risk-elimination area.

4	Handle in accordance with good industrial hygiene and safety practice.
5	Use explosion-proof electrical/ventilating/lighting/equipment.

Personal protection equipment

General requirement	    
Eye protection	Must wear appropriate anti-corrosion goggles.
Hand protection	Must wear acid and alkali resistant chemical protective gloves.
Respiratory protection	Must wear appropriate personal dust proof gas mask.
Skin and body protection	Must wear acid and alkali resistant chemical protective clothing.

Part 9: Physical and chemical properties

Physical and chemical properties

Physical state	Colorless transparent liquid
Colour	Colorless
Odour	No information available
Odour threshold	No information available
pH	< 1
Melting point/freezing point(°C)	-41.6
Boiling point/freezing point(°C)	121
Flash point(Closed cup,°C)	No information available
Evaporation rate	No information available
Flammability	No information available
Lower and upper explosion limit/flammability limit [% (v/v)]	Upper limit: No information available; Lower limit: No information available
Vapour pressure	6.4kPa(20°C)
Relative vapour density(Air = 1)	2.2
Relative density(Water=1)	1.4
Solubility(mg/L)	500000mg/L(20 °C)
Partition coefficient n-octanol/water (log value)	-0.21
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available
Particle characteristics	Not applicable

Part 10: Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible chemical reactions.	REDACTED	decomposition or other
Chemical stability	Stable under proper	REDACTED	itions.
Possibility of hazardous reactions	In contact with active release hydrogen.	REDACTED	Ca etc.) causes a reaction and

Conditions to avoid	Incompatibles materials, heat, flames and spark.
Incompatible materials	Alkali, sodium, calcium, and other active metal, halogen, metal oxides, nonmetal oxides, acyl halides and metal phosphide.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Part 11: Toxicological Information

Acute toxicity

Component	LD ₅₀ (oral)	LD ₅₀ (dermat)	LC ₅₀ (Inhalation,4h)
Nitric acid	No Information available	No Information available	2.65mg/L(Rat)

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Nitric acid	Not Listed	Not Listed
Water	Not Listed	Not Listed

Others

Nitric acid(Component)	
Skin corrosion/Irritation	Causes severe skin burns and eye damage(Category 1A)
Serious eye damage/Irritation	Causes serious eye damage(Category 1)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

Part 12: Ecological information

Acute aquatic toxicity

Acute aquatic toxicity	No information available
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Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
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Persistence and degradability

Persistence and degradability	No information available
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Bioaccumulative potential

Bioaccumulative potential	No information available
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Mobility in soil

Mobility in soil	No information available
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Results of PBT and vPvB assessment

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Component	Results of PBT and vPvB assessment (according to (EC) No 1907/2006 with amendment 2020/878)
Nitric acid	Not PBT/vPvB
Water	Not PBT

Part 13: Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

Part 14: Transport information

Label

Transporting Label	 
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IMDG-CODE

UN number	2031
UN proper shipping name	NITRIC ACID, other than red fuming, with at least 65%, but not more than 70% nitric acid
Transport hazard class	8
Transport subsidiary hazard class	5.1
Packing group	II
Marine pollutant (Yes or no)	No
EmS No.	F-A, S-Q

IATA-DGR

UN number	2031
UN proper shipping name	NITRIC ACID, other than red fuming, with $\geq 65\%$ but $\leq 70\%$ nitric acid
Transport hazard class	8
Transport subsidiary hazard class	5.1
Packing group	II

UN-ADR

UN number	2031	REDACTED
UN proper shipping name	NITRIC ACID, other than red fuming, with at least 65%, but not more than 70% nitric acid	
Transport hazard class	8	
Transport subsidiary hazard class	5.1	

Packing group	II
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Special precautions for user

Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements. Strictly prohibited shipping or transportation with acids, flammable goods, organic matter, reducing agents, spontaneous combustion, flammable goods which are wet.

Transport in bulk according to IMO instruments

- ◆ Transport in bulk according to Annex II of MARPOL and the IBC code

No information available

- ◆ Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

No information available

- ◆ Transport in bulk in accordance with the IGC Code

No information available

Part 15: Regulatory information**International chemical inventory**

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Nitric acid	√	√	√	√	√	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√	√	√	√	√	√

- [A] China Inventory of Existing Chemical Substances(IECSC)
 [B] European Inventory of Existing Commercial Chemical Substances(EC inventory)
 [C] United States Toxic Substances Control Act Inventory(TSCA)
 [D] Canadian Domestic Substances List(DSL)
 [E] New Zealand Inventory of Chemicals(NZIoC)
 [F] Philippines Inventory of Chemicals and Chemical Substances(PICCS)
 [G] Korea Existing Chemicals Inventory(KECL)
 [H] Australian Inventory of Industrial Chemicals(AIIC)
 [I] Japan Inventory of Existing & New Chemical Substances(ENCS)
 [J] Thailand Existing Chemicals Inventory(TECI)
 [K] Mexico National Inventory of Chemical Substances(INSQ)
 [L] Russia Inventory of Existing Substances(DRAFT)
 [M] Inventory of Existing Chemical Substances in Taiwan, China(TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
Nitric acid	x		x
Water	x		x

- [A] The Montreal Protocol on Substances that Deplete
 [B] Stockholm Convention on Persistent Organic Pollutants
 [C] Rotterdam Convention on the prior informed consent of states parties to certain hazardous chemicals and pesticides in international trade

Note:

"√" Indicates that the substance included in the regulations.

x No data or not included in the regulations.

Part 16: Other information

Information on revision

Creation Date	2026/08/11
Revision Date	-
Reason for revision	-

Reference

- [1] IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/lcsc/showcard.home>.
- [2] IARC, website: <http://www.iarc.fr/>.
- [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.chemportal.org/chemportal/>.
- [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.
- [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.
- [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
- [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
- [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organisation for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transport Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC ₅₀	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD ₅₀	Lethal Dose 50%	NTP	National Toxicology Program
EC ₅₀	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC _x	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P _{ow}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	G1	Carcinogenic to humans
G2A	Probably carcinogenic to humans	G2B	Possibly carcinogenic to humans
G3	Not yet classified as carcinogenic to humans	G4	Probably not carcinogenic to humans

Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 11th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability for particular purposes. We do not assume responsibility for loss, damage or expense arising from any use not connected with the handling, storage, use or disposal of the product.

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