

编 码:

产品名称: 液氯



危险
儿童不得触及
使用前请读标签

可能导致或加剧燃烧: 氧化剂。内装高压气体; 遇热可能爆炸。可能腐蚀金属。吸入致命。造成严重皮肤灼伤和眼损伤。对器官造成损害(吸入, 呼吸道系统)。长期或重复接触会对器官造成损害(吸入, 呼吸道系统、肾、肝)。对水生生物毒性极大并具有长期持续影响。

预防: 避开/贮存处远离服装/……/ 可燃材料。阀门及紧固装置不得带有油脂或油剂。只能在原容器中存放。不要吸入粉尘/烟/气体/烟雾/蒸气/喷雾。只能在室外或通风良好之处使用。[在通风不足的情况下] 戴呼吸防护装置。作业后彻底清洗……使用本产品时不要进食、饮水或吸烟。戴防护手套/穿防护服/戴防护眼罩/戴防护面具。避免释放到环境中。

应急: 如误吞咽: 漱口。不得诱导呕吐。如皮肤(或头发)沾染: 立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴。沾染的衣服清洗后方可重新使用。如误吸入: 将受害人转移到空气新鲜处, 保持呼吸舒适体位。立即呼叫解毒中心或医生。紧急具体治疗(见安全数据单)。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。立即呼叫解毒中心或医生。如接触到或有疑虑: 呼叫解毒中心或医生。具体治疗(见安全数据单)。如感觉不适, 求医/就诊。吸收溢出物, 防止材料损坏。收集溢出物。火灾时: 如能保证安全, 可设法堵塞泄漏。

贮存: 存放在通风良好的地方。贮存于抗腐蚀/……带抗腐蚀衬里的容器中。保持容器密闭。存放处须加锁。防日晒。存放在通风良好的地方。

处置: 处置内装物/容器……

CODE:

PRODUCT NAME: Chlorine



Danger

Keep out of reach of children

Read label before use

May cause or intensify fire; oxidizer. Contains gas under pressure; may explode if heated. May be corrosive to metals. Fatal if inhaled. Causes severe skin burns and eye damage. Causes damage to organs (inhalation, respiratory system). Causes damage to organs through prolonged or repeated exposure (inhalation, respiratory system, liver, kidney). Very toxic to aquatic life with long lasting effects.

Prevention: Keep/Store away from clothing/combustible materials. Keep valves and fittings free from oil and grease. Keep only in original container. Do not breathe dust/fume/gas/mist/ vapors / spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wash ... thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Avoid release to the environment.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Specific treatment is urgent (see Safety Data Sheet). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF exposed or concerned: Call a POISONCENTER/doctor. Specific treatment (see Safety Data Sheet). Get medical advice/attention if you feel unwell. Absorb spillage to prevent material damage. Collect spillage. In case of fire: Stop leak if safe to do so.

Storage: Store in well-ventilated place. Store in corrosive resistant/container with a resistant inner liner. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place.

Disposal: Dispose of contents/container to...

化学品安全数据单

一、标识

全球统一制度产品标识符：液氯/ Chlorine。

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： /

紧急电话号码： /

二、危险标识

物质或混合物的分类：

金属腐蚀剂第 1 类、氧化性气体第 1 类、高压气体（液化气体）、急性毒性（吸入）第 1 类、皮肤腐蚀/刺激第 1A 类、严重眼损伤/眼刺激第 1 类、特定目标器官毒性-单次接触第 1 类（吸入，呼吸道系统）、特定目标器官毒性-重复接触第 1 类（吸入，呼吸道系统、肾、肝）、危害水生环境（急性）第 1 类、危害水生环境（长期）第 1 类。

全球统一制度标签要素，包括防范说明：



信号词：危险。

危险说明：可能导致或加剧燃烧：氧化剂。内装高压气体；遇热可能爆炸。可能腐蚀金属。吸入致命。造成严重皮肤灼伤和眼损伤。对器官造成损害（吸入，呼吸道系统）。长期或重复接触会对器官造成损害（吸入，呼吸道系统、肾、肝）。对水生生物毒性极大并具有长期持续影响。

防范说明：

预防：避开/贮存处远离服装/……/ 可燃材料。阀门及紧固装置不得带有油脂或油剂。只能在原容器中存放。不要吸入粉尘/烟/气体/烟雾/蒸气/喷雾。只能在室外或通风良好之处使用。[在通风不足的情况下]戴呼吸防护装置。作业后彻底清洗……使用本产品时不要进食、饮水或吸烟。戴防护手套/穿防护服/戴防护眼罩/戴防护面具。避免释放到环境中。

应急：如误吞咽：漱口。不得诱导呕吐。如皮肤（或头发）沾染：立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴。沾染的衣服清洗后方可重新使用。如误吸入：将受害人转移到空气新鲜处，保持呼吸舒适体位。立即呼叫解毒中心或医生。紧急具体治疗（见安全数据单）。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。立即呼叫解毒中心或医生。如接触到或有疑虑：呼叫解毒中心或医生。具体治疗（见安全数据单）。如感觉不适，求医/就诊。吸收溢出物，防止材料损坏。收集溢出物。火灾时：如能保证安全，可设法堵塞泄漏。

贮存：存放在通风良好的地方。贮存于抗腐蚀/……带抗腐蚀衬里的容器中。保持容器密闭。存放处须加锁。防日晒。存放在通风良好的地方。

处置：处置内装物/容器……

不导致分类的其他危险： /

三、组成/成分信息

化学名称	化学文摘社登记号码 (CAS No.)	含量%
液氯	7782-50-5	99.6

四、急救措施

必要的急救措施

吸入：吸入蒸气或气溶胶(雾、烟)可能会引起肺水肿。确诊之前可以考虑使用含有地塞米松或倍氯米松衍生物的喷雾剂。如果接触气体后，将患者从气体来源或污染区域转移出去。

皮肤接触：用流动清水(如果可能，用肥皂)冲洗皮肤和头发。

眼睛接触：如物品接触眼睛，将患者从气体来源或污染区域转移出去。撑开眼睑，让物质蒸发。用洁净的凉水轻轻的漂洗受影响的眼睛至少 15 分钟。

食入：不认为是一种正常的接触途径。

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：良好的警告系统能使工作人员迅速撤离现场，从而能使大部分人仅吸入少量或适中的氯。如果现场不可能撤离，暴露于高浓度下很短时间就能导致呼吸困难，咳血，脸色发紫以及稍后并发症包括气管肺炎以及肺部水肿。延期，间歇性正压呼吸装置和喷雾型的支气管扩张剂对于轻度至中度的氯吸入有治疗效用。重度吸入必须住院以呼吸道急救方案进行治疗。任何有重度肺功能减低 (COPD) 且吸入氯的病人必须以重度呼吸急救方案进行救治。

五、消防措施

适当的灭火介质：对于小火：用大量的水。禁止用化学干粉，CO₂(二氧化碳)或泡沫。大火：从有保护的的位置用大量水覆盖火灾区。

化学品产生的具体危险：受热时，容器可能会爆炸 — 破裂的容器可能会喷出内含物。物质能够燃烧，但太不容易着火。暴露于火中的容器可能会通过压力解除设备泄漏出内容物。遇火会产生刺激性、毒性或腐蚀性的气体。物质的溢出可能会引起火灾或爆炸性灾害。物质受热或接触火焰可能会产生爆炸性分解。与气体接触能引起灼伤、严重损伤。有毒：如果吸入、食入或经皮吸收，能导致死亡。

消防人员的特殊防护行为：物质可能具有激烈的或爆炸性反应性。穿全身防护服，戴呼吸设备。在安全距离处、有充足防护的情况下灭火。如果安全，关掉电器设备，直至蒸气火灾危害被消除为止。喷水雾以控制火势，并冷却相邻区域。严禁接触怀疑为热的钢瓶。从安全防护场所喷水冷却接触火场的钢瓶。在安全的条件下，将钢瓶从火道中转移走。

六、意外释放措施

人身防范、保护设备和应急程序：存储和使用区域应当有贮留池以便在排放和处理前调整pH，并稀释泄漏液。定期检查泄漏情况。防止吸入蒸气，防止接触液体或气体。使用防护设备，包括呼吸器。禁止进入气体可能汇集的局限空间。

环境防范措施：增强通风。场所内禁止吸烟、外露灯光。只能在安全的情况下阻止泄漏。

抑制和清理的方法和材料：可以喷水或水雾来驱散蒸气。禁止进入气体可能汇集的受限空间。疏散场所内的所有人员，直至气体分散。将泄漏的钢瓶或气罐转移至安全的地方。安装通风管道。在安全可控制的情况下，释放钢瓶压力。在通风管道出口处燃烧溢出气体。不准在阀门上施加过多压力；不准尝试去操作已损坏的阀门。

七、搬运与储存

安全搬运的防范措施：考虑在密闭的压力系统中使用，这些系统应该带有温度、压力和安全释放阀，这些阀门应通气，以保证安全的排放。定期检查泄漏和漏洞。保持阀门密闭，但不要对手轮或钢瓶

楔施加更大的杠杆作用力。用刷子和洗涤剂检测漏洞，严格禁止使用明火检测。必要时，可以将松动的压紧螺母旋紧。如果钢瓶阀门不能完全关闭，将钢瓶转移至通风良好处(如室外)。钢瓶排空后，打上“缺陷”标记，返回给供应商。不准将气体从一个钢瓶或气罐转到另一个。

安全存储的条件，包括任何不相容性：钢瓶应存放在专门建造的储存场所，并保持良好通风，最好在室外开阔场所。储存场所的选址和建造应遵循相关法令的要求。储存场所应保持空旷无人，只有授权人员才可入内。户外开阔场所存放的钢瓶，应对生锈或接触恶劣天气采取保护措施。存放的钢瓶应正确固定，以防止倾倒或滚动。不使用时，钢瓶阀门应保持关闭状态。当钢瓶带有阀门防护设备时，这些设备应在适当的位置而正确固定。满装的钢瓶和空的钢瓶最好分开存放。在进入储存场所之前，应检查场所内的气体是否达到危害性浓度。对满装钢瓶的存放应进行安排，使存放时间最长的钢瓶最先被使用。应定期检查储存钢瓶的一般状况和泄漏情况。防止钢瓶受到物理损伤。人工搬运钢瓶时，应按照指导进行正确的移动和储存。

八、接触控制/人身保护

控制参数：/

紧急限制

成分	原 IDLH	修订 IDLH
氯	30 ppm	10 ppm

适当的工程控制：储存钢瓶的区域需要良好的通风条件，如果是封闭区域，需要采用分立的/控制的排气通风设备。

个人防护措施

防护眼罩/面具：化学护目镜。全面罩可以被用作眼部的辅助防护但不能做首选防护。隐形眼镜可能会造成一种特殊危害；软的隐形眼镜可能会吸收和富集刺激物。

皮肤防护：氯丁橡胶手套。当处理密封的容器时应戴布的或皮革手套。绝缘手套。工作服。PVC（聚氯乙烯）围裙。如果暴露严重，可能需要聚氯乙烯防护服。洗眼装置。保证现场有安全淋浴设施。

呼吸系统防护：呼吸器种类和型号的选择取决于呼吸区域污染物的等级以及污染物的化学性质。

高温危险：/

九、物理及化学性质

外观（物理状态、颜色等）	液化气体
气味	/
气味阈值	/
pH 值	/
熔点/凝固点	-101 °C
初始沸点和沸腾范围	-34.0 °C
闪点	/
蒸发速率	/
易燃性（固态、气态）	/
上下易燃极限或爆炸极限	/
蒸气压力(kPa)	666 @ 20 °C
蒸气密度（空气=1）	2.5 @ 20 °C
相对密度	1.41 @ 20C Liq.
可溶性	部分混溶
分配系数：n-辛醇/水	/
自动点火温度	/
分解温度	/

粘度	/
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十、稳定及反应性

反应性： /

化学稳定性： 物质是稳定的。

危险反应的可能性： 无机氧化剂与还原剂能发生反应，放出热量并生成气态产品(能导致密闭容器压力增加)。产品能自发性进行进一步反应(如在空气中燃烧)。有机化合物通常都有一定的还原能力，它们原则上能与本类化合物发生反应。无机氧化剂能与活泼金属、氰化物、酯类和硫氰酸盐（酯）发生剧烈的反应。

应避免的条件： 高温、热源等。

不相容材料： 有机化合物、还原剂、活泼金属等。

危险分解产物： /

十一、毒理学信息

暴露途径： 吸入、经口、皮肤、眼睛。

有关物理、化学和毒理学特点的症状： /

急性毒性效应：

吸入： 吸入蒸气具有危害性，甚至可致命。

食入： 由于产品的物理状态，一般没有危害。

皮肤： 不认为接触该物质后产生对健康有害的影响或皮肤刺激。通过割伤、擦伤或病变处进入血液，可能产生全身损伤的有害作用。

眼睛： 如果进入眼睛，该物质会造成严重眼睛损伤。

慢性毒性或长期毒性效应： 长期接触暴露于氯气中会导致呼吸容量降低。慢性中毒可能会导致咳嗽，严重的胸口疼痛，咽喉痛和咯血（咳血）。很多工人中度至深度暴露超过 3 年会造成肺部容量受损减少。延迟症状应包括呼吸急促，剧烈头痛，肺部水肿和肺炎。

毒性的数值度量（如急性毒性估计值）： 吸入（鼠）LC50: 293 ppm/1H。

十二、生态信息

毒性： 对水生生物毒性极大并具有长期持续影响。

持久性及降解性： /

生物累积潜力： /

在土壤中的流动性： /

其它有害效应： /

十三、处置考虑

处置方法： 在规定的地方蒸发残留物。把空的容器退还给供应商。保证受损的或不再使用的容器在废弃处置前完全排空气体。

十四、运输信息

联合国编号：1017。
联合国运输名称：氯。
运输危险种类：2.3+5.1+8。
包装类别：/
环境危害：海洋污染物。
使用者的特殊防范措施：/

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：GB16483-2008，GB13690-2009，GB18218-2009，GB15258-2009，GB6944-2012，GB190-2009，GB191-2009，GB12268-2008，GA57-1993，GB/T 15098-2008，GBZ 2-2007以及相关法规：《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	2015年06月09日

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: Chlorine.

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

Oxidizing Gases Category 1, Gas under Pressure (Liquefied gas), Corrosive to Metals Category 1, Acute Toxicity (Inhalation) Category 1, Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1, Specific Target Organ Toxicity-Single Exposure Category 1, Specific Target Organ Toxicity-Repeated Exposure Category 1, Hazardous to the Aquatic Environment (Acute) Category 1, Hazardous to the Aquatic Environment (Chronic) Category 1.

GHS Label elements, including precautionary statements



Signal word: Danger

Hazard statement(s): May cause or intensify fire; oxidizer. Contains gas under pressure; may explode if heated. May be corrosive to metals. Fatal if inhaled. Causes severe skin burns and eye damage. Causes damage to organs (inhalation, respiratory system). Causes damage to organs through prolonged or repeated exposure (inhalation, respiratory system, liver, kidney). Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention: Keep/Store away from clothing/combustible materials. Keep valves and fittings free from oil and grease. Keep only in original container. Do not breathe dust/fume/gas/mist/ vapors / spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wash ... thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Avoid release to the environment.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Specific treatment is urgent (see Safety Data Sheet). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF exposed or concerned: Call a POISONCENTER/doctor. Specific treatment (see Safety Data Sheet). Get medical advice/attention if you

feel unwell. Absorb spillage to prevent material damage. Collect spillage. In case of fire: Stop leak if safe to do so.

Storage: Store in well-ventilated place. Store in corrosive resistant/container with a resistant inner liner. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place.

Disposal: Dispose of contents/container to...

Other hazards which do not result in classification: /

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Chlorine	7782-50-5	99.6

SECTION 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. Following exposure to gas, remove the patient from the gas source or contaminated area.

In case of skin contact: Flush skin and hair with running water (and soap if available).

In case of eye contact: If product comes in contact with eyes remove the patient from gas source or contaminated area. Open the eyelid(s) wide to allow the material to evaporate. Gently rinse the affected eye(s) with clean, cool water for at least 15 minutes.

If swallowed: Not considered a normal route of entry.

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

Indication of immediate medical attention and special treatment needed: Excellent warning properties force rapid escape of personnel from chlorine vapour thus most inhalations are mild to moderate. If escape is not possible, exposure to high concentrations for a very short time can result in dyspnea, haemophysis and cyanosis with later complications being tracheobroncho-pneumonitis and pulmonary oedema. Oxygen, intermittent positive pressure breathing apparatus and aerosolised bronchodilators are of therapeutic value where chlorine inhalation has been light to moderate. Severe inhalation should result in hospitalisation and treatment for a respiratory emergency. Any chlorine inhalation in an individual with compromised pulmonary function (COPD) should be regarded as a severe inhalation and a respiratory emergency.

SECTION 5 FIREFIGHTING MEASURES

Suitable extinguishing media: FOR SMALL FIRE: USE FLOODING QUANTITIES OF WATER. DO NOT use dry chemical, CO₂, foam or halogenated-type extinguishers. FOR LARGE FIRE: Flood fire area with water from a protected position.

Special hazards arising from the chemical: May burn but does not ignite easily. Fire exposed cylinders may vent contents through pressure relief devices thereby increasing vapour concentration. Fire may produce irritating, poisonous or corrosive gases. Runoff may create fire or explosion hazard. May decompose explosively when heated or involved in fire. Contact with gas may cause burns, severe injury and/ or frostbite. POISONOUS: MAY BE FATAL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN

Special protective actions for fire-fighters: May be violently or explosively reactive. Wear full body protective clothing with breathing apparatus. Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to

control fire and cool adjacent area. DO NOT approach cylinders suspected to be hot. Cool fire exposed cylinders with water spray from a protected location. If safe to do so, remove cylinders from path of fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Check regularly for spills and leaks. Avoid breathing vapour and any contact with liquid or gas. Protective equipment including respirator should be used. DO NOT enter confined spaces where gas may have accumulated.

Environmental precautions: Increase ventilation. No smoking or naked lights within area. Stop leak only if safe to do so.

Methods and materials for containment and cleaning up: Water spray or fog may be used to disperse vapour. DO NOT enter confined space where gas may have collected. Keep area clear until gas has dispersed. Remove leaking cylinders to a safe place. Fit vent pipes. Release pressure under safe, controlled conditions. Burn issuing gas at vent pipes. DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Consider use in closed pressurised systems, fitted with temperature, pressure and safety relief valves which are vented for safe dispersal. Check regularly for spills or leaks. Keep valves tightly closed but do not apply extra leverage to hand wheels or cylinder keys. Test for leakage with brush and detergent - NEVER use a naked flame. Leaking gland nuts may be tightened if necessary. If a cylinder valve will not close completely, remove the cylinder to a well ventilated location (e.g. outside) and, when empty, tag as FAULTY and return to supplier. DO NOT transfer gas from one cylinder to another.

Conditions for safe storage, including any incompatibilities: Cylinders should be stored in a purpose-built compound with good ventilation, preferably in the open. Such compounds should be sited and built in accordance with statutory requirements. The storage compound should be kept clear and access restricted to authorised personnel only. Cylinders stored in the open should be protected against rust and extremes of weather. Cylinders in storage should be properly secured to prevent toppling or rolling. Cylinder valves should be closed when not in use. Where cylinders are fitted with valve protection this should be in place and properly secured. Gas cylinders should be segregated according to the requirements of the Dangerous Goods Act. Preferably store full and empty cylinders separately. Check storage areas for hazardous concentrations of gases prior to entry. Full cylinders should be arranged so that the oldest stock is used first. Cylinders in storage should be checked periodically for general condition and leakage. Protect cylinders against physical damage. Move and store cylinders correctly as instructed for their manual handling.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: /

EMERGENCY LIMITS

Ingredient	Original IDLH	Revised IDLH
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chlorine	30 ppm	10 ppm
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Appropriate engineering controls: Areas where cylinders are stored require good ventilation and, if enclosed, need discrete/controlled exhaust ventilation.

Personal protective equipment

Eye/face protection: Chemical goggles. Full face shield may be required for supplementary but never for primary protection of eyes. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

Skin protection: Neoprene gloves. When handling sealed and suitably insulated cylinders wear cloth or leather gloves. Insulated gloves. Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit. Ensure there is ready access to a safety shower.

Respiratory protection: Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.

Thermal hazards: /

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquified Gas
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	-101 °C
Initial boiling point and boiling range	-34.0 °C
Flash point	/
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	/
Vapour pressure	666 @ 20 °C
Vapour density	2.5 @ 20 °C
Relative density	1.41 @ 20C Liq.
Water solubility	Partly miscible
Partition coefficient: noctanol/water	/
Autoignition temperature	/
Decomposition temperature	/
Viscosity	/

SECTION 10 STABILITY AND REACTIVITY

Reactivity: /
Chemical stability: Product is considered stable.
Possibility of hazardous reactions: Inorganic oxidising agents can react with reducing agents to generate heat and products that may be gaseous (causing pressurization of closed containers). The products may themselves be capable of further reactions (such as combustion in the air). Organic compounds in general have some reducing power and can in principle react with compounds in this class. Inorganic oxidising agents can react violently with active metals, cyanides, esters, and thiocyanates.
Conditions to avoid: Heat, flames.
Incompatible materials: Organic compounds, reducing agents, active metals, etc.
Hazardous decomposition products: /

SECTION 11 TOXICOLOGICAL INFORMATION

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

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

Acute health effects

Inhalation: Inhalation of the vapour is hazardous and may even be fatal.

Ingestion: Not normally a hazard due to physical form of product.

Skin: The material is not thought to produce adverse health effects or skin irritation following contact. Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.

Eyes: The material produces severe ocular lesions.

Chronic health effects: Reduced respiratory capacity may result from chronic low level exposure to chlorine gas. Chronic poisoning may result in coughing, severe chest pains, sore throat and haemoptysis (bloody sputum). Moderate to severe exposures over 3 years produced decreased lung capacity in a number of workers. Delayed effects can include shortness of breath, violent headaches, pulmonary oedema and pneumonia.

Numerical measures of toxicity (such as acute toxicity estimates): Inhalation (rat) LC50: 293 ppm/1 hour.

SECTION 12 ECOLOGICAL INFORMATION

Toxicity: Very toxic to aquatic life with long lasting effects.

Persistence and degradability: /

Bioaccumulative potential: /

Mobility in soil: /

Other adverse effects: /

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: Evaporate residue at an approved site. Return empty containers to supplier. If containers are marked non-returnable establish means of disposal with manufacturer prior to purchase. Ensure damaged or non-returnable cylinders are gas-free before disposal.

SECTION 14 TRANSPORT INFORMATION

UN number: 1017.

UN proper shipping name: CHLORINE.

Transport hazard class(es): 2.3+5.1+8.

Packaging group: /

Environmental hazards: Marine pollutant.

Special precautions for user: /

SECTION 15 REGULATORY INFORMATION

Regulations:

This safety data sheet is in compliance with the following national standards: GB16483-2008, GB13690-2009, GB18218-2009, GB15258-2009, GB6944-2012, GB190-2009, GB191-2009, GB12268-2008, GA57-1993, GB/T 15098-2008, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.

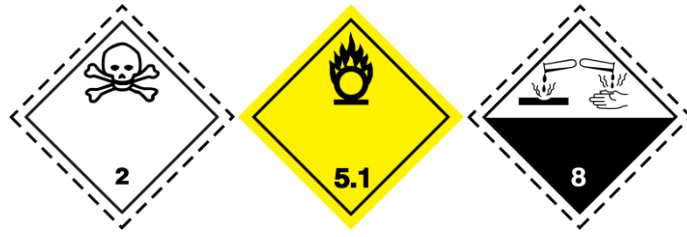
SECTION 16 OTHER INFORMATION

References	“Model Regulations on the Transport of Dangerous Goods” “The Globally Harmonized System of Classification and Labelling of Chemicals”
Form Date	09-June-2015

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 (such as boiling point does not exist for the solid) in the table with "/" logo.



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Chlorine

UN 1017