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产品技术数据表

(TDS)

本报告依据的产品信息由申请者提供并确认

THIS TDS IS AUTHORIZING BASED ON THE DATA SUPPLIED BY

AND IDENTIFIED ON BEHALF OF THE CLIENT.

产品名称: 碳化钙

SAMPLE NAME: Calcium carbide

单位: 内蒙古隆威化工科技有限责任公司

CLIENT NAME: Inner Mongolia Longwei Chmeical Technology Co.,LTD

单位地址: 内蒙古自治区鄂尔多斯市准格尔开发区纬四路南、 硝铵环形路东

CLIENT ADDRESS: Inner Mongolia Autonomous Region, Ordos City, Junge Development Zone, Wei fourth Road south, nitrate ring Road east

TDS 编号: TDS NO.: ZX250509-C240602

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产品技术数据表

Technical Data Sheet

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第 1 部分: 产品描述

SECTION 1: Product Description

产品名称: 碳化钙
Product name: Calcium carbide

状态: 固体
Product model: Solid

第 2 部分: 主要成分

SECTION 2: Main Ingredients

成分名称	含量 (%)	CAS 编号
Chemical name	Concentration (%)	CAS NO.
碳化钙	85	75-20-7
Calcium carbide		
钙	5	7440-70-2
Calcium		
碳	5	90597-58-3
Carbon		
杂质(游离碳)	5	/
Impurities (free carbon)		

第 3 部分: 产品概要及用途

SECTION 3: Product Description And Usage

概要及用途: 生产乙炔气, 炼钢脱硫。
Product profile and usage: Production of acetylene gas, steelmaking desulfurization.



碳化钙是生产乙炔的主要原料,而乙炔在有机合成工业中是重要的基础原料,可用于生产多种有机化学品,如聚氯乙烯、氯丁橡胶、醋酸乙烯等。此外,它还可用于金属切割和焊接等领域。

Calcium carbide is the main raw material for producing acetylene, Acetylene is an important basic raw material in the organic synthesis industry, which can be used to produce various organic chemicals such as polyvinyl chloride, chloroprene rubber, vinyl acetate, etc. In addition, it can also be used in fields such as metal cutting and welding.

第 4 部分: 物理和化学特性

SECTION 4: Physical And Chemical Properties

产品外观与现状:

Appearance and Current
Situation of Products:

灰色块状固体

Grey blocky solid

第 5 部分: 理化参数分析

SECTION 5: Physical And Chemical Parameter Analysis

产品特点:

Product characteristics:

外观与性状:

Appearance and character:

通常为灰色、棕褐色或黑色块状固体,纯碳化钙呈无色透明晶体。

Typically gray, brown, or black block like solid, pure calcium carbide appears as colorless and transparent crystals.

溶解性:

Solubleness:

碳化钙不溶于醇和氨,微溶于水,且与水会发生剧烈反应。

Calcium carbide is insoluble in alcohols and ammonia, slightly soluble in water, and undergoes violent reactions with water.

导电性:

Conductivity:

具有一定的导电性,这一特性使其在一些工业应用中具有特殊的用途。

It has a certain degree of conductivity, which makes it particularly useful in some industrial applications.

密度:

Density:

密度约为 2.22g/cm^3 , 比水重。

The density is about 2.22g/cm^3 , which is heavier than water.

与水反应:

Reacting with water:

碳化钙与水反应生成乙炔和氢氧化钙,并放出大量的热。这一反应是工业上生产乙炔的重要方法,也是碳化钙最显著的化学性质之一。

Calcium carbide reacts with water to produce acetylene and calcium hydroxide, releasing a large amount of heat. This reaction is an important method for industrial production of acetylene and one of the most significant chemical properties of calcium carbide.

稳定性:

stability:

在常温常压下,碳化钙具有较好的稳定性,但在高温、潮湿或与其他特定物质接触时,可能会发生化学反应。

Calcium carbide has good stability at room temperature and pressure, but it may undergo chemical reactions at high temperatures, humidity, or when in contact with other specific substances.



氧化性: 碳化钙具有一定的氧化性, 能与一些具有还原性的物质发生氧化还原反应。

Oxidability: Calcium carbide has certain oxidizing properties and can undergo redox reactions with some reducing substances.

遇湿易燃: 碳化钙遇水产生的乙炔是易燃气体, 与空气混合能形成爆炸性混合物, 遇明火、高热能引

Flammable when wet: 起燃烧爆炸。因此, 在储存、运输和使用过程中, 要严格防止其与水接触, 同时要避免火源和静电等引发爆炸的因素。

Acetylene produced by calcium carbide in contact with water is a flammable gas that can form explosive mixtures when mixed with air. It can ignite and explode when exposed to open flames or high heat energy. Therefore, during storage, transportation, and use, it is necessary to strictly prevent it from coming into contact with water, while avoiding factors such as fire sources and static electricity that can cause explosions.

第 6 部分: 操作处置与储存

SECTION 6: Handling And Storage

操作注意事项: 操作人员必须经过专门培训, 严格遵守操作规程。

Precautions for safe handling: Operators must be professionally trained and must strictly follow operating instructions.

远离火种、热源。工作场所严禁吸烟。

Keep away from fire and heat source. Smoking is strictly prohibited in the workplace.

搬运时要轻装轻卸, 防止包装及容器损坏。

Handle with care to preempt package or container breakage.

患有皮肤过敏史的个体不应受雇于任何与本产品有关的作业。

Individuals with a history of skin allergies should not be employed in any work related to this product.

遵守良好的卫生程序和卫生习惯。

Adhere to good hygiene procedures and hygiene habits.

储存条件: 储存在场地平整、阴凉、通风、干燥的仓库内。

Conditions for safe storage: Store in a flat, cool, ventilated and dry warehouse.

远离火种、热源。

Keep away from fire and heat.

远离不相容材料。

Stay away from incompatible materials

应与氧化剂、食用化学品分开存放, 切忌混储。

Separate from oxidants chemicals, Mixed storage is not allowed.

避免受潮。通常采用密封包装, 以防止空气中的水分进入。

Avoid moisture. Sealed packaging is usually used to prevent moisture from entering the air.

储区应备有泄漏应急处理设备和合适的收容材料。

The storage area should be equipped with emergency leakage treatment equipment



and appropriate shelter materials.

第 7 部分: 废弃处置

SECTION 7: Waste Disposal

废弃化学品:
Waste chemicals:

中和反应: 如果废弃的碳化钙量较少, 可以在安全的场所, 在专业人员的监督下, 将碳化钙缓慢加入到大量的水中, 让其与水充分反应生成乙炔和氢氧化钙。由于反应会产生乙炔气体, 所以要确保反应在通风良好的环境中进行, 远离火源和热源, 防止乙炔积聚引发爆炸。反应完成后, 得到的氢氧化钙溶液可以用适量的酸进行中和, 调节 pH 值至中性左右。

Neutralization reaction: If the amount of discarded calcium carbide is small, it can be slowly added to a large amount of water in a safe place under the supervision of professionals, allowing it to fully react with water to produce acetylene and calcium hydroxide. Due to the production of acetylene gas during the reaction, it is necessary to ensure that the reaction is carried out in a well ventilated environment, away from sources of fire and heat, and to prevent acetylene accumulation from causing explosions. After the reaction is complete, the obtained calcium hydroxide solution can be neutralized with an appropriate amount of acid to adjust the pH value to around neutral.

专业回收: 联系专业的危险废物处理公司进行回收处理。这些公司具备相应的资质和设备, 能够按照环保要求对碳化钙进行安全处置。在交付废弃碳化钙时, 需要提供详细的物品信息, 包括成分、数量、危险特性等, 以便处理公司采取合适的处置措施。

Professional recycling: Contact a professional hazardous waste disposal company for recycling and disposal. These companies have the corresponding qualifications and equipment to safely dispose of calcium carbide in accordance with environmental requirements. When delivering waste calcium carbide, detailed item information is required, including composition, quantity, hazardous characteristics, etc., in order for the processing company to take appropriate disposal measures.

填埋处理: 如果碳化钙已经经过无害化处理, 例如经过与水反应及中和后的产物, 可以根据当地环保部门的要求, 选择合适的填埋场进行填埋。但填埋场应具备防止渗漏和污染地下水的措施, 避免对土壤和水体造成二次污染。

Landfill treatment: If calcium carbide has undergone harmless treatment, such as reaction with water and neutralization products, a suitable landfill site can be selected for landfill according to the requirements of the local environmental protection department. But landfills should have measures to prevent leakage and pollution of groundwater, avoiding secondary pollution of soil and water bodies.

第 8 部分: 运输信息

SECTION 8: Transportation Information

运输方式: 公路运输, 铁路运输, 水路运输。

Mode of transport: Road transportation, railway transportation, waterway transportation

运输注意事项: 在运输过程中应防漏、防破损。

Matters of attention to Leakage and breakage shall be prevented during transportation.



transportation: 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。

Transport vehicles should be equipped with enough amount of proper fire-fighting equipment and equipment for emergency leakage control.

运输工具上应根据相关运输要求张贴危险标志、公告。

Dangerous signs and announcements shall be posted on the means of transport in accordance with the relevant transport requirements.

第 9 部分: 委托方信息

SECTION 9: Client Information

化学品中文名称: 碳化钙

Product name: Calcium carbide

生产企业名称: 内蒙古隆威化工科技有限责任公司

Client: Inner Mongolia Longwei Chmeical Technology Co.,LTD

地址: 内蒙古自治区鄂尔多斯市准格尔开发区纬四路南、 硝铵环形路东

Address: Inner Mongolia Autonomous Region, Ordos City, Junge Development Zone, Wei fourth Road south, nitrate ring Road east

电话: 13847979941

TEL:

邮箱: 116079154@qq.com

E-mail:

应急电话: 18648039999

Emergency TEL:

邮编: 010499

Post code: