编　　码：

产品名称：环己酮

警告

儿童不得接触

使用前请读标签

易燃液体和蒸气。吸入有害。

预防：

远离热源/火花/明火/热表面。禁止吸烟。保持容器密闭。容器和接收设备接地/等势联接。使用防爆的电气/通风照明/设备。只能使用不产生火花的工具。采取防止静电放电的措施。戴防护手套/穿防护服/戴防护眼罩/戴防护面具。避免吸入粉尘/烟/气体/烟雾/蒸汽/喷雾。只能在室外或通风良好之处使用。

反应：

火灾时：使用泡沫、化学干粉灭火。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。如误吸入：将受害人转移到空气新鲜处，保持呼吸舒适的休息姿势。如感觉不适，呼叫解毒中心或医生。

贮存：

存放在通风良好的地方。保持低温。

处置：

按照相关规定处置内装物和容器。

CODE：

PRODUCT NAME：Cyclohexanone

Warning

Keep out of the reach of children.

Read label before use.

Flammable liquid and vapor. Harmful if inhaled.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Response:

In case of fire: Use foam, chemical powder to extinguish. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

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

化学品安全数据单

一、标识

全球统一制度产品标识符：环己酮/ Cyclohexanone。
其它标识办法：/
化学品使用建议和使用限制：本品可用作油漆、油墨、合成树脂、合成橡胶的溶剂和稀释剂，也可以作为食品用香料等。
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：
易燃液体第 3 类
急性毒性（吸入）第 4 类。
全球统一制度标签要素，包括防范说明：

信号词：警告。
危险说明：易燃液体和蒸气。吸入有害。
防范说明：
预防：
远离热源/火花/明火/热表面。禁止吸烟。保持容器密闭。容器和接收设备接地/等势联接。使用防爆的电气/通风照明/设备。只能使用不产生火花的工具。采取防止静电放电的措施。戴防护手套/穿防护服/戴防护眼罩/戴防护面具。避免吸入粉尘/烟/气体/烟雾/蒸汽/喷雾。只能在室外或通风良好之处使用。
反应：
火灾时：使用泡沫、化学干粉灭火。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。如误吸入：将受害人转移到空气新鲜处，保持呼吸舒适的休息姿势。如感觉不适，呼叫解毒中心或医生。
贮存：
存放在通风良好的地方。保持低温。
处置：
按照相关规定处置内装物和容器。
不导致分类的其他危险：/

三、组成/成分信息

化学名称	化学文摘社编号（CAS No.）	成分（由送检企业提供）
环己酮	108-94-1	99.9%

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，用大量流动清水或生理盐水彻底冲洗至少 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、泡沫等灭火。

化学品产生的具体危险：液体和蒸气易燃。受热或接触明火，有中等程度的火灾危险。蒸气与空气能形成爆炸性混合物。

消防人员的特殊防护行动：佩戴呼吸设备及防护手套。采取一切可能的措施防止溢出物进入下水道或水道。如果可以保证安全，关掉电器，直至气体火灾危害被清除。用喷水雾的方法来控制火势，并冷却邻近区域。避免直接喷水到液池中。不要靠近可能灼热的容器。从有防护的位置喷水以便冷却暴露于火灾中的容器。如果这么做安全的话，将容器从火场中移走。

六、意外释放措施

人身防范、保护设备和应急程序：避免吸入蒸气，避免接触皮肤和眼睛。使用防护装备控制人员接触。

环境防范措施：禁止吸烟、明火或点火源。加强通风。在安全的前提下，阻止泄漏。

抑制和清洁的方法和材料：小量泄漏：用蛭石或其它吸附性物质来收集并吸附少量泄漏物。擦除。收集残留物置于易燃废弃物容器。大量泄漏：可以用喷水或水雾的方法来驱散/吸收蒸气。用沙子、土或蛭石来吸收泄漏物。只能使用不产生火花的铲子和防爆设备。收集可回收的产品于贴有标签的容器中，以便回收利用。用沙子、土或蛭石来吸收残留的产品。

收集固体残留物，密封于贴有标签的桶中，以便废弃处置。冲洗泄漏区域，并防止进入下水体。

七、搬运与储存

安全搬运的防范措施：避免个体接触，包括吸入。当有接触危险时，穿戴防护服。在通风良好的区域使用。防止本品在低洼处汇集。未作空气检测，禁止进入封闭空间内。禁止吸烟、明火或点火源。防止产生静电。禁止用塑料桶。所有线路和设备都应接地。操作处置时，使用不产生火花的工具。避免接触不相容物料。操作处置时，禁止进食、饮水或吸烟。不使用时，容器应保持安全密封。防止容器受到物理损伤。

安全存储的条件，包括任何不相容性：采用原装容器存放在经批准的防爆区域。远离不相容材料，存储于阴凉、干燥、通风良好的地方。禁止存放在凹坑、洼地、地下室或者气体能够汇聚的场所。禁止吸烟、明火、受热或接触点火源。应与易（可）燃物、氧化剂等分开存放，切忌混储。储区应备有用于处理泄漏的吸附剂。

八、接触控制/人身保护

控制参数：

来源	物质名称	TWA
中国 工作场所有害因素职业接触限值	环己酮	50 (mg/m^3)

适当的工程控制：严加密闭，提供充分的局部排风。

个人保护措施

防护眼罩/面具：带侧框保护的安全眼镜。化学护目镜。隐形眼镜可能会造成特殊危害；软性隐形眼镜可能会吸收和富集刺激物。

皮肤防护：戴化学防护手套(如聚氯乙烯手套)。穿安全鞋或安全靴(如橡胶材料)。如果暴露严重，可能需要聚氯乙烯防护服。

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）	无色透明液体。
气味	/
气味阈值	/
pH 值	/
熔点/凝固点	-16.4℃。
初始沸点和沸腾范围	156℃。
闪点	46.0℃。
蒸发速率	/
易燃性（固态、气态）	易燃。
上下易燃极限或爆炸极限	1.1%-8.1%。
蒸气压力	0.266kPa（20℃）。
蒸气密度	3.4。
相对密度	0.947。
可溶性	混溶。
分配系数：正辛醇/水	0.81。
自动点火温度	420℃。
分解温度	/
粘度	/

十、稳定及反应性

反应性：/

化学稳定性：在常温下稳定。

危险反应的可能性：与强氧化剂，如硝酸发生反应，有着火和爆炸的危险。

应避免的条件：火星、高温、静电。

不相容材料：氧化剂、易燃或可燃物。

危险分解产物：一氧化碳(CO)，二氧化碳 (CO_2)，有机物燃烧产生的其他典型热解产物。

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：吸入可能引起呼吸道刺激。意外摄入可能有害，会导致恶心、呕吐、腹痛、

咽喉痛等症状。可能引起皮肤刺激。可能引起眼睛刺激。

慢性毒性或长期毒性效应：本物质可能引起眼睛严重刺激，导致明显的炎症。多次或持续接触刺激物能导致结膜炎。长期或多次接触本物质可引起皮肤发炎，接触后可引起皮肤发红、肿胀、形成水疱、脱皮和皮肤肥厚。

毒性的数值度量（如急性毒性估计值）：

毒性	刺激性
Dermal (rabbit) LD50: 948 mg/kg	Eye (human): 75 ppm
Inhalation (human) TCLo: 75 ppm	Eye (rabbit): 0.25 mg/24h SEVERE
Inhalation (rat) LC50: 8000 ppm/4h	Eye (rabbit): 4.74 mg SEVERE
Oral (rat) LD50: 1535 mg/kg	Skin (rabbit): 500 mg(open) mild

十二、生态信息

毒性：/

持久性和降解性：低。

生物累积潜力：低。

在土壤中的流动性：低。

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：1915。

联合国正式运输名称：环已酮。

运输危险分类：3。

包装类别（如果适用）：III。

环境危险：/

用户的特殊防范措施：/

十五、管理信息

国内化学品安全管理法规：本化学品安全数据单遵照了以下相关国家标准：GB 16483-2008、GB 13690-2009、GB 6944-2012、GB/T 15098-2008、GB 18218-2009、GB 15258-2009、GB 190-2009、GB 191-2009、GB 12268-2008、GA 57-1993、GBZ 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	2014-12-04

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: Cyclohexanone.

Other means of identification: /

Recommended use of the chemical and restrictions on use: This material can be used as solvent and thinner of paints, inks, synthetic resins and synthetic rubbers. It can be used as food perfume, etc.

Supplier's details: /

Emergency phone number: /

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Flammable liquids Category 3

Acute toxicity, inhalation Category 4

GHS Label elements, including precautionary statements:

Signal word: Warning

Hazard statement(s): Flammable liquid and vapor. Harmful if inhaled.

Precautionary statement(s):

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Response:

In case of fire: Use foam, chemical powder to extinguish. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage:

Store in a well-ventilated place. Keep cool.

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%
Cyclohexanone	108-94-1	99.9%

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: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of 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 alcohol-resistant foam or chemical powder.

Special hazards arising from the chemical: Liquid and vapour are flammable. Moderate fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air.

Special protective actions for fire-fighters: Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. 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. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Environmental precautions: No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so.

Methods and materials for containment and cleaning up: Minor Spills： Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container. Major Spills： Water spray or fog may be used to disperse / absorb vapour. Contain spill with sand, earth or vermiculite. Use only spark-free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of overexposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid generation of static electricity. DO NOT use plastic buckets. Earth all lines and equipment. Use spark-free tools when handling. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers

securely sealed when not in use. Avoid physical damage to containers.

Conditions for safe storage, including any incompatibilities: Store in original containers in approved flammable liquid storage area. Store away from incompatible materials in a cool, dry, well-ventilated area. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. No smoking, naked lights, heat or ignition sources. Keep away from flammable materials and oxidizers. Keep adsorbents for leaks and spills readily available.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Source	Material name	TWA
China Occupational Exposure Limits for Hazardous Agents in the Workplace	Cyclohexanone	50 (mg/m^3)

Appropriate engineering controls: Local exhaust ventilation or a process enclosure ventilation system may be required.

Individual protection measures

Eye/face protection: Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

Skin protection: Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber. PVC protective suit may be required if exposure severe.

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 (physical state, colour etc)	Colorless transparent liquid.
Odour	/
Odour Threshold	/
pH	/
Melting point/freezing point	-16.4℃.
Initial boiling point and boiling range	156℃.
Flash point	46.0℃.
Evaporation rate	/
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limits	1.1%-8.1%。
Vapour pressure	0.266kPa（20℃）。
Vapour density	3.4。
Relative density	0.947。
Solubility(ies)	Miscible。
Partition coefficient: n-octanol/water	0.81。
Auto-ignition temperature	420℃。
Decomposition temperature	/
Viscosity	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: This material is stable in normal temperature.

Possibility of hazardous reactions: Reacts with strong oxidants such as nitric acid. This generates fire and explosion hazard.

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

Incompatible materials: Flammable materials and oxidizers.

Hazardous decomposition products: carbon monoxide (CO) , carbon dioxide (CO_2) , other pyrolysis products typical of burning organic material.

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: Inhalation of the material may produce respiratory tract irritation. Accidental ingestion of the material may be harmful and cause nausea, vomit, throat pain, abdominal pain. This material may produce skin and eyes irritation.

Chronic health effects: The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

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

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 948 mg/kg	Eye (human): 75 ppm
Inhalation (human) TCLo: 75 ppm	Eye (rabbit): 0.25 mg/24h SEVERE
Inhalation (rat) LC50: 8000 ppm/4h	Eye (rabbit): 4.74 mg SEVERE
Oral (rat) LD50: 1535 mg/kg	Skin (rabbit): 500 mg(open) mild

Section 12 ECOLOGICAL INFORMATION

Toxicity: /

Persistence and degradability:low.

Bioaccumulative potential: low.

Mobility in soil: low.

Other adverse effects: /

Section 13 DISPOSAL CONSIDERATIONS

Disposal methods: Burial in a land-fill specifically licensed to accept chemical. Reuse of broken container is forbidden.

Section 14 TRANSPORT INFORMATION

UN number: 1915.
UN proper shipping name: CYCLOHEXANONE.
Transport hazard class(es) : 3.
Packing group, if applicable: III.
Environmental hazards: /
Special precautions for user: /

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards: GB 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2009, GB 15258-2009, GB 6944-2012, GB 190-2009, GB 191-2009, GB 12268-2008, GA 57-1993, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation [Published by the Ministry of Railways, 2008], Dangerous Chemicals Safety Administrative Regulation [Published by the State Council, 2011].

Section 16 OTHER INFORMATION

References	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
Form Date	04-Dec.-2014

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.

环己酮

CYCLOHEXANONE

UN 1915