

编 码：

产品名称：正丁醇



危险

儿童不得接触

使用前请读标签

易燃液体和蒸气。吞咽有害。造成皮肤刺激。造成严重眼损伤。可能造成呼吸道刺激。可能引起昏昏欲睡或眩晕。

预防：

远离热源、热表面、火花、明火和其他点火源。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。作业后彻底清洗双手。使用本产品时不要进食、饮水或吸烟。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：使用水雾、泡沫、干粉灭火。如误吞咽：如感觉不适，呼叫解毒中心或医生。漱口。如皮肤（或头发）沾染：用水清洗皮肤/淋浴。具体治疗（见安全数据单）。如发生皮肤刺激：求医/就诊。脱掉沾染的衣服，清洗后方可重新使用。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。保持容器密闭。存放处须加锁。

处置：

按照相关规定处置内装物和容器。

CODE:

PRODUCT NAME: 1-Butanol



Danger

Keep out of the reach of children.

Read label before use.

Flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. May cause drowsiness or dizziness.

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Response:

In case of fire: Use water spray, foam or chemical powder to extinguish. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin (or hair): Rinse skin with water/shower. Specific treatment (see safety data sheet). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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 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. Keep container tightly closed. Store locked up.

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：正丁醇/1-Butanol。

其它标识办法：1-丁醇；丙基甲醇。

化学品使用建议和使用限制：本品可用作色谱分析试剂、食用香料，也用于有机合成等。

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（口服）第4类

皮肤腐蚀/刺激第2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3类（呼吸道刺激）

特定目标器官毒性——单次接触第3类（麻醉效应）。

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：易燃液体和蒸气。吞咽有害。造成皮肤刺激。造成严重眼损伤。可能造成呼吸道刺激。可能引起昏昏欲睡或眩晕。

防范说明：

预防：

远离热源、热表面、火花、明火和其他点火源。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。作业后彻底清洗双手。使用本产品时不要进食、饮水或吸烟。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：使用水雾、泡沫、干粉灭火。如误吞咽：如感觉不适，呼叫解毒中心或医生。漱口。如皮肤（或头发）沾染：用水清洗皮肤/淋浴。具体治疗（见下文）。如发生皮肤刺激：求医/就诊。脱掉沾染的衣服，清洗后方可重新使用。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。保持容器密闭。存放处须加锁。

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)
正丁醇	71-36-3	99.86%

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、雾状水、泡沫等灭火。

化学品产生的具体危险: 易燃液体, 其蒸汽可与空气形成爆炸性混合物, 遇高热、明火有起火爆炸的危险。

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, 使用喷雾状水保持火场内容器等冷却。

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。用防爆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、搬运与储存

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, 戴化学安全防护眼镜, 穿防毒物渗透工作服, 戴防酸碱手套。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。应与易(可)燃物、氧化剂等分开存放, 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:

来源	物质名称	TWA
中国 工作场所有害因素职业接触限值	正丁醇	100 (mg/m ³)

适当的工程控制：严加密闭，提供充分的局部排风。

个人防护措施

防护眼罩/面具：呼吸系统防护中已作防护。

皮肤防护：穿连衣式胶布防毒衣。

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	-90℃。
初始沸点和沸腾范围	117℃。
闪点	38.0℃。
蒸发速率	/
易燃性（固态、气态）	/
上下易燃极限或爆炸极限	1.4%～11.3%。
蒸气压力	0.58kPa（20℃）。
蒸气密度	2.6。
相对密度	0.81。
可溶性	7.7g/100ml（20℃）。
分配系数：正辛醇/水	0.9。
自动点火温度	345℃。
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：加热到 100℃时，与铝发生反应。与强氧化剂如三氧化铬反应，生成易燃/爆炸性气体氢。腐蚀某些塑料、橡胶和涂层。

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、铝。

危险分解产物：碳氧化物。

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：吸入后会导致咳嗽、咽喉刺激、倦睡、头晕。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、疼痛。食入会导致恶心、咽喉痛、腹痛、呕吐等症状。

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。长期或反复接触本物质可能引起皮肤刺激，接触后可出现皮肤发红、肿胀、水疱形成、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: 3400 mg/kg	Eye (human): 50 ppm - irritant
Inhalation (human) TClO: 25 ppm	Eye (rabbit): 1.6 mg-SEVERE
Inhalation (human) TClO: 86000 mg/m ³	Eye (rabbit): 24 mg/24h-SEVERE
Inhalation (rat) LC50: 8000 ppm/4h	Skin (rabbit): 405 mg/24h-moderate
Oral (rat) LD50: 790 mg/kg	

十二、生态信息

毒性： /
持久性和降解性： /
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： 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： 1120。
联合国正式运输名称： 丁醇。
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	2015-6-08

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: 1-Butanol.

Other means of identification: /

Recommended use of the chemical and restrictions on use: This material can be used as chromatographic analysis reagent and food perfume. It can also be used in organic synthesis.

Supplier's details: /

Emergency phone number: /

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Flammable liquids Category 3

Acute toxicity, oral Category 4

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 1

Specific target organ toxicity, single exposure; Respiratory tract irritation Category 3

Specific target organ toxicity, single exposure; Narcotic effects Category 3

GHS Label elements, including precautionary statements:



Signal word: Danger

Hazard statement(s): Flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement(s):

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Response:

In case of fire: Use water spray, foam or chemical powder to extinguish. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin (or hair): Rinse skin with water/shower. Specific treatment (see under for further information). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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 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. Keep container tightly closed. 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%
1-Butanol	71-36-3	99.86%

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: Never give anything by mouth to an unconscious person. 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, chemical powder or water spray.

Special hazards arising from the chemical: Liquid and vapour are flammable. May explode and burn in 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.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up: Contain spillage and then collect with pump and place in a clean container for disposal according to local regulations.

Section 7 HANDLING AND STORAGE

Precautions for safe handling: Wear protective gloves/eye protection/face protection/protective clothing. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking.

Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from flammable materials and oxidizers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Source	Material name	TWA
China Occupational Exposure Limits for Hazardous Agents in the Workplace	1-Butanol	100 (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. Impervious clothing,

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	-90°C.
Initial boiling point and boiling range	117°C.
Flash point	38.0°C.
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	1.4% ~ 11.3%.
Vapour pressure	0.58kPa (20°C).
Vapour density	2.6.
Relative density	0.81.
Solubility(ies)	7.7g/100ml (20°C).
Partition coefficient: n-octanol/water	0.9.
Auto-ignition temperature	345°C.
Decomposition temperature	/
Viscosity	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: This material is stable in normal temperature.

Possibility of hazardous reactions: Reacts with aluminum when heated to 100°C and strong oxidants such as chromium trioxide. This produces flammable/explosive gas hydrogen. Attacks some forms of plastic, rubber and coatings.

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

Incompatible materials: Flammable materials, aluminum and oxidizers.

Hazardous decomposition products: Oxycarbides.

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, throat pain, dizziness and drowsiness. Oral intake cause headache, giddiness, vomit and other symptoms. 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 characterized by skin redness (erythema) and swelling the epidermis.

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

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 3400 mg/kg	Eye (human): 50 ppm - irritant
Inhalation (human) TCLo: 25 ppm	Eye (rabbit): 1.6 mg-SEVERE
Inhalation (human) TCLo: 86000 mg/m ³	Eye (rabbit): 24 mg/24h-SEVERE
Inhalation (rat) LC50: 8000 ppm/4h	Skin (rabbit): 405 mg/24h-moderate
Oral (rat) LD50: 790 mg/kg	

Section 12 ECOLOGICAL INFORMATION

Toxicity: /

Persistence and degradability: /

Bioaccumulative potential: /

Mobility in soil: /

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: 1120.
UN proper shipping name: BUTANOLS.
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	08-Jun-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 or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.



丁醇

BUTANOLS

UN 1120