



化学品安全数据单

一、标识

全球统一制度产品标识符: 甲苯二异氰酸酯/ Toluene diisocyanate (UNATE T-100)。

其它标识办法: 2,4-二异氰酸甲苯酯; 甲苯-2,4-二异氰酸酯。

化学品使用建议和使用限制: 本品可用于生产聚氨酯产品, 也可作为粘合剂。

供货商的详细情况: 优麦化学(山东)有限公司; 上海市闸北区广中西路 555 号宝华国际广场 601 室; 电话: 0086-21-26018300, 传真: 0086-21-26018301。

紧急电话号码: 00865346120172 邮箱: sds@umax-chem.com

二、危险标识

物质或混合物的分类:

急性毒性: (吸入-蒸汽) 分类 2*

皮肤腐蚀/刺激: 分类 2

严重眼损伤/眼刺激: 分类 2

呼吸过敏物: 分类 1

皮肤过敏物: 分类 1

致癌性: 分类 2

特定目标器官毒性——单次接触: 分类 3 (呼吸道刺激)

危害水生环境: 分类 3。

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: 吸入致命。造成皮肤刺激。造成严重眼刺激。吸入可能导致过敏或哮喘病症状或呼吸困难。可能导致皮肤过敏反应。怀疑会致癌。可能造成呼吸道刺激。对水生生物有害并具有长期持续影响。

防范说明:

预防:

不要吸入粉尘/烟/气体/烟雾/蒸汽/喷雾。只能在室外或通风良好之处使用。如通风不足, 戴呼吸防护装置。作业后彻底清洗双手。受污染的工作服不得带出工作场地。在使用前取得专用说明。在阅读并明了所有安全措施前切勿搬动。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。

反应:

如皮肤沾染: 用水充分清洗。具体治疗(见下文)。脱掉沾染的衣服, 清洗后方可重新使用。如发生皮肤刺激或皮疹: 求医/就诊。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。立即呼叫解毒中心或医生。紧急专门治疗(见下文)。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。如仍觉眼刺激: 求医/就诊。如接触到或有疑虑: 求医/就诊。

贮存:

存放在通风良好的地方。保持容器密闭。存放处须加锁。



附件 1：安全数据单样本（中文）

报验号：
272302014000310 第 2 页，共 5 页

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）
2,4-甲苯二异氰酸酯	584-84-9	99%
2,6-甲苯二异氰酸酯	584-84-9	1%

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、二氧化碳、水雾等灭火。

化学品产生的具体危险：在高温高热下可燃，燃烧分解放出有毒烟气。

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。处在火场中的容器若已变色或从安全泄压装置中产生声音，必须马上撤离。

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质。**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。应与氧化剂、易（可）燃物等分开存放，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	STEL
中国 工作场所所有害因素职业接触限值	甲苯二异氰酸酯	0.1 (mg/m ³)	0.2 (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	21.5-23.5℃。
初始沸点和沸腾范围	251℃。
闪点	127℃。
蒸发速率	/
易燃性（固体、气体）	/
上下易燃极限或爆炸极限	0.9%~9.5%。
蒸气压力	0.03 mmHg（25℃）。
蒸气密度	6.0。
相对密度	1.22。
可溶性	与水反应。溶于乙醇、丙酮等有机溶剂。
分配系数：正辛醇/水	0.21。
自动点火温度	620℃。
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：在碱、叔胺和酰基氯作用下，该物质可能聚合，有着火和爆炸危险。燃烧时生成有氮氧化物和异氰酸酯毒蒸气和气体。与水、酸和醇类反应，引起压力升高，有爆炸危险。
应避免的条件：高温、火星、静电。
不相容材料：氧化剂、酸类、水、醇类、易（可）燃物。
危险分解产物：一氧化碳、二氧化碳、氮氧化物等。

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、咽喉疼痛、严重可致命。皮肤接触会导致皮肤发红、刺激。眼睛接触后会导致发红、疼痛、刺激。食入会导致咳嗽、恶心、头痛、咽喉痛、腹痛、腹泻等症状。

慢性毒性或长期毒性效应：反复或长期接触可能引起皮肤过敏、哮喘症状和癌症。

毒性的数值度量（如急性毒性估计值）：

毒性	刺激性
Inhalation (human) TClO: 20 ppb/2 yr	Eye (rabbit): 100 mg - SEVERE
Inhalation (human) TClO: 500 ppb	Skin (rabbit): 500 mg(open)-SEVERE
Inhalation (human) TClO: 80 ppb	Skin (rabbit):500 mg/24hr-moderate
Inhalation (rat) LC50: 14 ppm/14 hr	
Inhalation (rat) LC50: 600 ppm/6 hr	
Oral (rat) LD50: 5800 mg/kg	

十二、生态信息

毒性：对水生生物有害并具有长期持续影响。

鱼类	LC50 133 mg/L 96 小时
甲壳类	EC50 12.5 mg/L 48 小时
鸟类	EC50 4,300 mg/L 96 小时

持久性和降解性：log Kow 3.74。

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：2078。

联合国正式运输名称：甲苯二异氰酸酯。

运输危险分类：6.1。

包装类别（如果适用）：II。

中国危货编号：61111

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/T 16483-2008、GB 13690-2009、GB 6944-2012、GB/T 15098-2008、GB 18218-2018、GB 15258-2009、GB 190-2009、GB 191-2009、GB 12268-2012 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	修改日期：2019-5-20

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: Toluene diisocyanate (UNATE T-100).

Other means of identification: /

Recommended use of the chemical and restrictions on use: This material can be used to produce polyurethane products and can also be used as adhesive.

Supplier's details: /

Emergency phone number:00865346120172 E-mail:sds@umax-chem.com

Section 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute Toxicity (Inhalation) Category 2*

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Sensitisation, respiratory Category 1

Sensitisation, skin Category 1

Carcinogenicity Category 2

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

Hazardous to the aquatic environment, long-term hazard Category 3

GHS Label elements, including precautionary statements:

Signal word: Danger

Hazard statement(s): Fatal if inhaled. Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response:

If on skin: Wash with plenty water. Specific treatment (see under for further information). Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment is urgent (see under for further



information). If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.

Storage:

Store in a well-ventilated place. 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%
2,4Toluene diisocyanate	584-84-9	99%
2,6Toluene diisocyanate	584-84-9	1%

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 chemical powder, carbon dioxide, water spray, foam, etc.

Special hazards arising from the chemical: This material may burn and decompose at 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	STEL
China Occupational Exposure Limits for Hazardous Agents in the Workplace	Toluene diisocyanate	0.1 (mg/m ³)	0.2 (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	21.5-23.5°C.
Initial boiling point and boiling range	251°C.
Flash point	127°C.
Evaporation rate	/
Flammability (solid, gas)	/
Upper/lower flammability or explosive limits	0.9% ~9.5%.
Vapour pressure	0.03 mmHg(25°C).
Vapour density	6.0.
Relative density	1.22.
Solubility(ies)	React with water. It's soluble in alcohols, acetone and other organic solvents.
Partition coefficient: n-octanol/water	0.21.
Auto-ignition temperature	620°C.
Decomposition temperature	/
Viscosity	/

Section 10 STABILITY AND REACTIVITY

Reactivity: /**Chemical stability:** This material is stable in normal temperature.**Possibility of hazardous reactions:** The substance may polymerize under the influence of bases, tertiary amines and acyl chlorides. This generates fire or explosion hazard. On combustion, it forms toxic gases and vapours including nitrogen oxides and isocyanates. Reacts readily with water, acids and alcohols. This generates pressure-rise explosion hazard. **Conditions to avoid:** Spark, static electricity and high temperature.**Incompatible materials:** Flammable materials, water, oxidizers, acids and alcohols.**Hazardous decomposition products:** Oxycarbides, nitrogen oxides, etc.

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 fatal and cause cough and throat pain. Oral intake may cause headache, giddiness, vomit and other symptoms. This material may produce skin and eyes irritation.**Chronic health effects:** Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation may cause asthma. This substance is possibly carcinogenic to humans.**Numerical measures of toxicity(such as acute toxicity estimates):**

TOXICITY

IRRITATION

Inhalation (human) TCl_o: 20 ppb/2 yr Eye (rabbit): 100 mg - SEVEREInhalation (human) TCl_o: 500 ppb Skin (rabbit): 500 mg(open)-SEVEREInhalation (human) TCl_o: 80 ppb Skin (rabbit):500 mg/24hr-moderateInhalation (rat) LC₅₀: 14 ppm/14 hrInhalation (rat) LC₅₀: 600 ppm/6 hrOral (rat) LD₅₀: 5800 mg/kg

Section 12 ECOLOGICAL INFORMATION

Toxicity: Harmful to aquatic life with long lasting effects.Fish LC₅₀ 133 mg/L 96hoursCrustacea EC₅₀ 12.5 mg/L 48 hoursBirds EC₅₀ 4,300 mg/L 96 hours**Persistence and degradability:** log Kow 3.74.**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: 2078.
UN proper shipping name: TOLUENE DIISOCYANATE.
Transport hazard class(es) : 6.1.
Packing group, if applicable: II.
CN number: 61111
Special precautions for user: /

Section 15 REGULATORY INFORMATION

Regulations: This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB 191-2009, GB 12268-2012, 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, 2013].

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	20-May-2019

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.