

# 物質安全資料表

## MATERIAL SAFETY DATA SHEET

### 1. 製造商或供應商資料

Identification of the substance/preparation and company

產品名稱：彈性膠水 Product Name: Elastic Adhesive	
產品編號：SA-777 Product Number : SA-777	
製造商/供應商：廣州市台佳工業材料有限公司 Producer/Supplier Name : Bonhan Industry Material CO.,LTD	
地址：廣州市番禺大道北 555 號天安科技園發展大廈 822-823 室 Address:822-823Rm. Development Building, Hi-tech Ecological Park, No. 555 North Panyu Avenue, GZ, China	
電話：020-39211644 TEL : 020-39211644	傳真：020-39211646 FAX : 020-39211646
緊急聯絡電話 : 020-39211645 Emergency Call : 020-39211645	

### 2. 危害辨識資料

Composition / Information on Ingredients

GHS 物品危害分類：

易燃液體第 2 級。急毒性物質（吸入）第 5 級。刺激皮膚物質第 2 級。嚴重損傷、刺激眼睛物質第 2A 級。生殖毒性物質第 2 級。特定目標器官、系統毒性物質（單一暴露）第 3 級。特定目標器官、系統毒性物質（重複暴露）第 2 級。吸入性危害物質第 1 級。水環境危害（急性）第 2 級。

標示內容：



象徵符號：驚嘆號、火焰、健康危害

警示語：危險

危害警告訊息：

1. 高度易燃液體和蒸氣。2. 吸入可能有害。3. 造成皮膚刺激。4. 造成眼睛嚴重刺激。5. 懷疑對生育能力或對胎兒造成傷害。6. 可能造成困倦或暈眩。7. 長期或重複暴露會對中樞神經及周圍神經系統造成損害。8. 如果吞食並進入呼吸道可能致命。9. 對水生生物有毒並具有長期影響。

危害防範措施：

1. 遠離火源，如熱源/火花/明火，嚴禁抽煙。2. 保持容器密閉。3. 將容器和回收設備接地/連接。4. 使用防爆的電器/通風/照明/設備。5. 只能使用不產生火花的工具。6. 採取防止靜電放電的措施。7. 著用防護手套

和眼睛/臉部防護具。8. 處置後徹底洗淨雙手。9. 使用取得說明。10. 處置前必須閱讀並瞭解所有安全注意事項。11. 避免吸入粉塵/煙/氣體/噴霧。12. 在室外或通風良好的環境使用。13. 避免排放至環境中。

其他危害：—

## GHS Classification

Flammable liquids, Category 2

Acute toxicity - Inhalation, Category 5

Skin corrosion/irritation, Category 2

Eye irritation, Category 2A

Toxic to reproduction, Category 2

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

Specific target organ toxicity - repeated exposure, Category 2

Auditory system, Central nervous system (CNS), and Peripheral nervous system (PNS)

Aspiration hazard, Category 1

Aquatic toxicity (acute), Category 2

GHS label elements

Symbol(s)



Signal word: Danger

Hazard Statements:

Highly flammable liquid and vapor.

May be fatal if swallowed and enters airways.

Causes skin irritation.

Causes serious eye irritation.

May be harmful if inhaled.

May cause drowsiness and dizziness.

Suspected to damaging fertility or the unborn child.

May cause damage to central nervous system and peripheral nervous system.

Toxic to aquatic life with long lasting effects.

Precautionary statements:

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.

Wash hands thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment

Other Hazards: -

### 3. 危害成分辨識資料

#### Hazard Identification

混合物(Mixtures)：

組成成分名稱 Components	CAS 編碼 CAS NO.	組成占比 Concentration
甲苯 TOLUENE	108-88-3	30%
乙酸乙酯 EAC	141-78-6	7%
甲基環己烷 METHYLCYCLOHEXANE	108-87-2	5%
熱熔膠 HMG	25038-32-8	20%
彈性樹酯 SEBS	66070-58-4	23%
合成樹脂 OIL RESIN	64742-16-1	15%

### 4. 急救措施

#### First Aid Measures

不同暴露途徑之急救方法(Emergency and First Aid Procedures)：

吸入：立即將患者移至通風處，稍作休息，並請示醫師。

皮膚接觸：立即脫去已受汙染的衣服，並以大量清水、肥皂清洗。

眼睛接觸：馬上用大量清水中洗，並保持眼皮張開至少 10 分鐘，並儘速就醫。

食入：用水徹底清洗口腔，勿催吐。立即就醫。如於 6 小時內出現呼吸短促、胸悶、體溫升至 38℃ 以上、

持續性咳嗽及氣喘等延遲症狀，請立即送醫。
最重要症狀及危害效應：－
對急救人員之防護：急救人員應穿著 C 級防護設備在安全區進行急救。
對醫生之提示：請參照此 MSDS
<p>General advice</p> <p>Keep victim calm. Obtain medical treatment immediately. Show this material safety data sheet to the doctor.</p> <p>Inhalation: Move victim to fresh air and keep comfortable position to relax. If still feel uncomfortable, obtain medical attention.</p> <p>Skin Contact: Remove contaminated clothing. Wash off with soap and plenty of water. If persistent irritation occurs, obtain medical attention.</p> <p>Eye Contact: Flush eyes with plenty of water. Take of the contact lenses and keep flushing eyes if the contact lenses which can easily been taken off. If persistent irritation occurs, obtain medical attention.</p> <p>Ingestion: Do not induce vomiting: transport to nearest medical facility for additional treatment. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3° C), shortness of breath, chest congestion or continued coughing or wheezing.</p>
Major Hazard Effect: －
<p>First-aid Personal Protection:</p> <p>First-aid personal should wear adequate personal protective equipment and give first aid at safe areas.</p>
Note to Physician: Please refer to this MSDS.

## 5. 滅火措施

### Fire Fighting Measures

<p>適用滅火器：（抗酒精）泡沫、水霧、噴霧式滅火器。化學乾粉、二氧化碳、砂土僅適用於小型火勢。</p> <p>Suitable Extinguishing Media:</p> <p>Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only</p>
<p>不適用滅火器：高壓水柱</p> <p>Unsuitable Extinguishing Media: Do not use water in a jet.</p>
<p>滅火可能遭遇之特殊危害：</p> <p>有機蒸氣比空氣重，會沿著地面向外擴散，有遠距離引燃的危險。甲苯會浮在水面上，可能再度被引燃。燃燒不完全時，會釋放出一氧化碳（CO）。</p>

Special Hazard:

The vapor is heavier than air, spreads along the ground and distant ignition is possible. Toluene will float and can be reignited on surface water. Carbon monoxide may be evolved if incomplete combustion occurs.

特殊滅火程式：滅火時位處上風處以避免接觸有毒之分解物。

Special Extinguishing Procedure:

Stay upwind while extinguishing fire to avoid contacting with hazardous vapors and toxic decompositions

消防人員之特殊防護裝備：穿戴全身式防護衣以及自攜式呼吸器具。

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

其他建議：可以噴霧使鄰近的容器降溫。

Other Advice: Keep adjacent containers cool by spraying with water

## 6. 意外洩漏處理方法

### Accidental Release Measures

個人應注意事項：

1. 隔離污染區域並禁止非必要或未有良好防務措施的人員進入。
2. 使用個人防護器具。
3. 避免吸入蒸氣。
4. 移開周遭可能的火源。
5. 疏散在場工作人員至安全區域。
6. 注意蒸氣與空氣混和至相當比例會形成爆炸性混合物。
7. 蒸氣會積蓄在低處。

Personal precautions:

1. Isolate hazard area and deny entry to unnecessary or unprotected personnel.
2. Use personal protective equipment.
3. Avoid breathing vapors, mist or gas.
4. Remove all sources of ignition.
5. Evacuate personal to safe areas.
6. Beware of vapors accumulating to form explosive concentrations.
7. Vapours can accumulate in low areas.

環境注意事項：

1. 在安全的情況下，防止更進一步的洩漏或溢出。
2. 切勿將溢漏之污染物排放至環境中。

Environmental precautions:

1. Prevent further leakage or spillage if safe to do so.
2. Do not let product enter drains.

汙染清理方法：

使用防靜電的真空吸取器或吸濕性物質收集溢漏，存儲在容器中並依地方規定處理。

Methods and materials for containment and cleaning up:

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

## 7. 安全處置與儲存方法

### Handling and Storage

處置：

避免接觸眼睛及皮膚。避免吸入蒸氣。有機溶劑蒸氣與空氣混和會生成爆炸性混合物，故應遠離火源，例如熱源/火花/明火拼嚴禁抽煙

Handling:

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Beware of vapors accumulating to form explosive concentrations. Keep away from sources of ignition – No smoking

儲存：

保持容器密閉並存放於乾燥、涼爽通風處，保持低溫。乙酸乙酯遇水會水解產生乙酸，故不宜存放於銅制容器內，（軟）銅、鐵及鋁制容器適合。

Storage:

Keep container cool and tightly closed in a dry and well-ventilated place. Ethyl acetate react with water to produce acetic acid, the reaction makes it suitable to store in steel and aluminum containers rather than bronze containers.

## 8. 曝露預防措施/個人防護設備

### Exposure Controls/Personal Protection

危害物質成分 (Hazardous Components Name)	八小時日時量 平均容許濃度 TWA	短時間時量 平均容許度 STEL	最高容許 濃度 CEILING	生物指標 BEI	
				測試動物 吸收途徑 LD50	測試動物 吸收途徑 LC50
甲苯 (TOLUENE)	100 ppm	125 ppm		636mg/kg 大鼠吞食 Rat, Swallowed	400mg/24H 大鼠吸入 Rat, Inhaled
乙酸乙酯 (EAC)	400 ppm	500 ppm		5600mg/kg 大鼠吞食 Rat, Swallowed	16000 ppm/6h 大鼠吸入 Rat, Inhaled
甲基環己烷 (METHYLCYCLOHEXANE)	400 ppm	500 ppm		>3200 ppm 大鼠吞食 Rat, Swallowed	36900 ppm/2h 小鼠吸入 Mouse, Inhaled

個人防護設備

呼吸防護：著用合適的臉部防護具。依用量、及濃度大小穿戴活性碳口罩、自攜式呼吸面罩

手部防護：著用合適的溶劑防護手套，建議長時間防護可採用 Viton（含氟橡膠）手套；短時間防接觸、潑濺則以 Nitrile（丁腈橡膠）手套為佳。

眼睛防護：著用合適的防潑濺眼睛防護具

皮膚及身體防護：著用合適的全身式防護衣

Personal protective equipment

Respiratory Protection: Wear suitable respiratory protection equipment. Depends on operating situation, activated carbon mask and self-contained breathing apparatus

are appropriate.

Hand Protection: Wear suitable solvent protective gloves. For long-term protection, Viton gloves are recommended; on the other hand, Nitrile gloves are recommended for short-term protection.

Eye Protection: Wear suitable splash-resistant goggles.

Skin and Body Protection: Wear suitable full protective clothing

衛生措施：養成良好的作業衛生及安全習慣。處置後徹底清洗雙手。

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product.

## 9. 物理及化學性質

### Physical and Chemical properties

外觀：液體	氣味：芳香煙氣味
味覺閾值：0.35 ppm	熔點：-
酸鹼值：微酸性	起始沸點或沸點範圍：111°C
分解溫度：-	閃火點：4.4°C 方法：閉杯
自燃點：480°C	爆炸上限：7.0% 爆炸下限：1.0%
蒸氣壓：22mmHg (20°C)	蒸氣密度(空氣=1)：3.14
相對密度(水=1)：0.89~0.91	溶解度：0.05%
辛醇/水分配係數：-	揮發速度(乙酸乙酯=1)：2.2

Appearance: thick liquid	Odor: aromatic odor
Odor threshold: 0.35 ppm	Melting point: -
pH: mild acid	Initial boiling point and boiling range: 111°C
Decomposition temperature: -	Flash point: 4.4°C Method: closed cup
Auto-ignition temperature: 480°C	UEL: 7.0% LEL: 1.0%
Vapor pressure: 22mmHg (20°C)	Vapor density (air = 1): 3.14
Relative density (to water): 0.89~0.91	Solubility: 0.05%
Partition coefficient n-octanol/water: -	Evaporation rate (BAC = 1): 2.2

## 10. 反應性與安定性

### Stability and reactivity

化學安定性：一般操作及（在建議的條件下）儲藏情形下安定

Chemical stability: Stable under recommended storage conditions.

特殊狀況下可能之危害反應：與強氧化劑接觸會有劇烈反應。蒸氣與空氣混和會形成爆炸性混合物。

Possibility of hazardous reactions: Violent reaction will occur when contact with Strong Oxidizing.

Vapors may form explosive mixture with air.
應避免之情況：避免於密閉或不通風的環境下做操作。避免陽光直接照射及存放於過高的溫度。 Conditions to avoid: Operating in airtight or unventilated environment. Extremes of temperature and direct sunlight.
應避免之物質：強氧化劑、過氧化物、強酸 Materials to avoid: Strong oxidizing agents, hyperoxide, and over strong acids
危害分解物：無可用資料 Hazardous oxidizing agents: N/A

## 11. 毒性資料

### Toxicological Information

可能暴露途徑：皮膚吸收、皮膚接觸、吸入、眼睛接觸、食入 Likely routes of exposure: Skin absorption, skin contact, inhalation, eye contact, and accidental ingestion.
症狀：疲憊、噁心、頭痛、貧血、中樞神經系統抑制、嗜睡 Signs and Symptoms of Exposure: Fatigue, Nausea, Headache, Anemia, Drowsiness, and Central nervous system depression
<p>急毒性：</p> <p>甲 苯：短時間吸入 2256 mg/m<sup>3</sup> 濃度之甲苯蒸氣，會引起過度疲憊、噁心、頭痛、興奮等。TJ36-79 規定車間空氣中最高容許濃度為 100 mg/m<sup>3</sup>。</p> <p>乙 酸 乙 酯：具麻醉作用，蒸氣會刺激眼睛、皮膚及黏膜。高濃度蒸氣能致使肝、腎充血。TJ36-79 規定車間空氣中最高容許濃度為 300 mg/m<sup>3</sup>。</p> <p>甲基環己烷：毒性較環己烷低，但麻醉作用較環己烷強。皮膚接觸會引刺激。美國規定車間空氣中最高容許濃度為 2005 mg/m<sup>3</sup>。</p> <p>Acute Toxicity:</p> <p>Toluene: May cause fatigue, nausea, headache, and exciting if inhale toluene vapor over 2256 mg/m<sup>3</sup>. Standard TJ36-79 regulated the ceiling of concentration of toluene vapor in production work shop is 100 mg/m<sup>3</sup>.</p> <p>Ethyl acetate: May cause anesthetic effect. EAC vapor will cause irritation to eyes, skin and mucous membrane. Exposure to high concentration of EAC vapor may cause liver and kidney congestion. Standard TJ36-79 regulated the ceiling of concentration of EAC vapor in production work shop is 300 mg/m<sup>3</sup>.</p> <p>Methylcyclohexane: The toxicity of MCH is lower than Cyclohexane while the anesthetic effect is higher. Exposure to MCH vapor may make skin irritation. Standard of America regulated the ceiling of concentration of MCH vapor in production work shop is 2005 mg/m<sup>3</sup>.</p>
慢毒性或長期毒性 甲 苯：長時間吸入低濃度之甲苯蒸氣，造成慢性中毒，引起食欲減退、疲勞、貧血等情況。



乙酸乙酯：長期暴露在 4200~13900 ppm 濃度下僅造成輕度眼睛刺激。

甲基環己烷：長期暴露下可能造成皮膚紅腫、皸裂、潰瘍。

#### Chronic or Long-term Toxicity:

Toluene: May have fatigue, anemia and cause appetite loss if continuous inhaling low concentration of toluene vapor in the long term.

Ethyl acetate: Long-term exposure to ethyl acetate vapor, about 4,200 to 43,900 ppm, may cause slight eye irritation.

Methylcyclohexane: Long-term exposure to methylcyclohexane vapor may cause skin swelling, cracked and ulcer.

特殊效應：-

Fertility effects: -

## 12. 生態資料

### Ecological Information

#### 生態急毒性

甲 苯：

LC50 (魚類): 7.3~2.8mg/l/96H

EC50 (水生無脊椎動物): —

水生物濃縮係數 (BCF): 1.67~380

乙酸乙酯：

LC50 (魚類): —

EC50 (水生無脊椎動物): —

水生物濃縮係數 (BCF): —

甲基環己烷：

LC50 (魚類): 5.8mg/l/96H

EC50 (水生無脊椎動物): —

水生物濃縮係數 (BCF): 4~14

#### Acute eco-toxicity

Toluene:

Fish (LC50): 7.3~2.8mg/l/96H

Aquatic Invertebrates (EC50): -

BCF: 1.67~380

Ethyl acetate

Fish (LC50): -

Aquatic Invertebrates (EC50): -

BCF: -

Methylcyclohexane

Fish (LC50): 5.8mg/l/96H

Aquatic Invertebrates (EC50) : -

BCF : -

#### 持久性與降解性

##### 甲 苯 :

1. 甲苯釋放到空氣中以後，可經與氫氧基反應而快速地被分解。
2. 在各種不同的標準生物分解性測試中發現，甲苯可以很快地被分解掉。
3. 甲苯在魚體及水中的無脊椎動物體內無明顯的生物濃縮作用。

半衰期 (空氣) : 10~104 小時

半衰期 (水表面) : 96~528 小時

半衰期 (地下水) : 168~672 小時

半衰期 (土壤) : 96~528 小時

##### 乙 酸 乙 酯 :

1. 乙酸乙酯相當容易被生物分解。

半衰期 (空氣) : 35.3~353 小時

半衰期 (水表面) : 24~168 小時

半衰期 (地下水) : 48~336 小時

半衰期 (土壤) : 24~168 小時

##### 甲基環己烷 :

半衰期 (空氣) : —

半衰期 (水表面) : —

半衰期 (地下水) : —

半衰期 (土壤) : —

#### Persistence/degradability

##### Toluene

1. When toluene release to the air, it can rapidly react with hydroxyl group and be decomposed.
2. Toluene can rapidly be decomposed under every Standard biodegradability tests.
3. Toluene has no significant bio-accumulation in the body of fish and aquatic invertebrates.

Half-life period (Air): 10~104 hr.

Half-life period (Water Surface): 96~528 hr.

Half-life period (Groundwater): 168~672 hr.

Half-life period (Soil): 96~528 hr.

##### Ethyl acetate

1. Ethyl acetate is easily biodegradable.

Half-life period (Air): 35.3~353 hr.

Half-life period (Water Surface): 24~168 hr.

Half-life period (Groundwater): 48~336 hr.

Half-life period (Soil): 24~168 hr.

##### Methylcyclohexane

Half-life period (Air): - Half-life period (Water Surface): - Half-life period (Groundwater): - Half-life period (Soil): -
潛在生物蓄積性：無明顯生物蓄積性 Bioaccumulative potential: Does not bioaccumulate significantly.
土壤中的流動性：- Mobility in Soil: -
其他不良效應：對水中生物有害 Other Adverse Effects: Harmful to aquatic life


### 13. 廢棄處置方法

#### Disposal Considerations

廢棄處置方法： 1. 依地方/國家相關法規處理。2. 依倉儲條件儲存待處理的廢棄物。3. 可採用特定的焚化、掩埋法處理。 Disposal Considerations 1. Obbey local/national legislation. 2. Store the waste to be treated per storage conditions. 3. May use specific incineration and landfill methods.
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### 14. 運送資料

#### Transport Information

聯合國編號 UN Number	1133
名稱及說明 Proper Shipping Name (PSN)	黏合劑，包含易燃液體 Adhesives, containing a flammable liquid
運輸危害分類 Class	3
包裝類別 Package group	II
海洋污染物(是/否) Marine pollutant (Y/N)	是 Y
危害分類標籤 Hazard class label:	

### 15. 法規資料

## Regulatory Information

適用法規：

1. 國際海運危險貨物規則（IMDG CODE）
2. 國際公路運輸危險貨物協議（ADR）
3. 國際鐵路運輸危險貨物協議（RID）
4. 空運危險貨物安全運輸技術規則（國際空運危規）（ITIA, DGR）
5. 中華人民共和國安全生產法
6. 危險化學品安全管理條例
7. 勞動衛生法規
8. 危險物及有害的通用規則
9. 事業廢棄物貯存清除處理方法及設施標準
10. 有機溶劑中毒預防規則。

Application of regulations

1. IMDG CODE
2. ADR
3. RID
4. ITIA (DGR)
5. Production Safety Law of the People's Republic of China
6. The Regulations on the Safety Administration of Dangerous Chemicals
7. Labor Safety and Health Law
8. General Rules of Labeling Hazardous and Harmful Goods
9. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
10. The regulation on organic solvent poisoning prevention。

## 16. 其他資料

### Other Information

<p>參考文獻 Reference</p>	<p>危害性化學物質緊急處理手冊 Emergency Handbook of Hazardous chemical 溶劑手冊（第五版） Solvent handbook (5<sup>th</sup> Edition) 化學品全球分類及標示調和制度（GHS）2011 年第 4 版 GHS (4<sup>th</sup> Edition, 2011)</p>
<p>製表單位 Sheet-Making Unit</p>	<p>名稱：廣州市台佳工業材料有限公司 Name: Bonhan Industry Material CO.,LTD</p> <p>地址：廣州市番禺大道北 555 號天安科技園發展大廈 822-823 室 Address: 822-823Rm, Development Building, Hi-tech Ecological Park, No. 555 North Panyu Avenue, GZ, China</p> <p>連絡電話：020-39211644</p>

	TEL: 020-39211644	
製表者 Sheet Maker	職稱：管理者 Position：Administrator	姓名：周倩 Name：Susan Zhou
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