

TACHIA CHEMICAL CO., LTD.

TEL : (886)4-2687-1012 FAX : (886)4-2687-5563
525, Section 1, Chung-Sun Rd., Tachia 437010, Taiwan,

安全資料表

Safety Data Sheet

1、化學品名稱與廠商資料 Identification of the substance / preparation and company

化學品名稱：No. NCA-00 油性透明金油 Product Information: No. NCA-00 Solvent-Based Clear Medium 唯一配方識別碼 Unique formula identifier (UFI)：JPP8-6GJ2-7703-7E03
其他名稱：塗料、油漆 Other Name: Paint, Ink
建議用途及限制使用：大部分織物 (如天然纖維、尼龍、聚酯...等)、PU 皮、皮革及 TPU 等印刷 Recommended Application: Printing ink for all kinds of fabrics (such as natural fiber, nylon, polyester...etc.), PU, leather and TPU substrates.
製造者、輸入者或供應者名稱、位址及電話： Names, addresses, and phone numbers of the manufacturer, importer or supplier: 大甲化工實業(股)公司 台中市大甲區中山路一段 525 號 886-4-26871012 Tachia Chemical Co., Ltd. 525, Sec. 1, Chung Sun Rd., 437010 Tachia, Taiwan 886-4-26871012 緊急連絡電話/傳真電話 Emergency Phone / Fax：886-4-26871012 / 886-4-26875563

2、危害辨識資料 Hazard Identification

依據 EC No. 1272/2008 CLP、GHS、EC No. 1907/2006 REACH 等法規及 ECHA 資料分類。

Classification according to EC No. 1272/2008 CLP, GHS, EC No. 1907/2006 REACH regulations & ECHA information.

危害分類 Hazard class		危害訊息 Hazard statement	
分類 Class	級別 Category	代碼 Code	訊息 Statement
易燃液體 Flammable liquids	3	H226	易燃液體和蒸氣 Flammable liquid and vapor
急毒性物質：吞食 Acute toxicity, oral	4	H302	吞食有害 Harmful if swallowed
急毒性物質：皮膚 Acute toxicity, dermal	4	H312	皮膚接觸有害 Harmful in contact with skin
腐蝕 / 刺激皮膚物質 Skin corrosion/irritation	2	H315	造成皮膚刺激 Causes skin irritation
嚴重損傷 / 刺激眼睛物質 Serious eye damage/eye irritation	2A	H319	造成嚴重眼睛刺激 Causes serious eye irritation
特定標的器官系統毒性物質 - 單一暴露 STOT - single exposure	3	H335	可能造成呼吸道刺激 May cause respiratory irritation
特定標的器官系統毒性物質 - 單一暴露 STOT - single exposure	3	H336	可能造成困倦或暈眩 May cause drowsiness or dizziness

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致癌物質 Carcinogenicity	2	H351	懷疑致癌 Suspected of causing cancer
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STOT : 特定標的器官系統毒性物質 Specific target organ toxicity

標示內容 Index contents :

象徵符號 Symbols :



警示語 : 警告

Signal word: Warning

危害防範措施 Hazardous Prevention/ Storage :

預防 Prevention :

P203 使用前取得、閱讀並遵守所有安全說明。

Obtain, read and follow all safety instructions before use.

P210 遠離熱源/ 火花/ 明火/ 熱表面 - 禁止抽菸。

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P233 保持容器密閉。

Keep container tightly closed.

P240 容器和承受設備接地/ 連接。

Ground / bond container and receiving equipment.

P241 使用防爆的電器/ 通風/ 照明/ 設備。

Use explosion-proof electrical / ventilating / light / equipment.

P242 只能使用不產生火花的工具。

Use only non-sparking tools.

P243 採取防止靜電放電的措施。

Take precautionary measures against static discharge.

P261 避免吸入粉塵/ 煙煙/ 氣體/ 煙霧/ 蒸氣/ 噴霧。

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

P264+P265 處置後徹底清洗。不要觸摸眼睛。

Wash thoroughly after handling. Do not touch eyes.

P270 使用本產品時，不得飲食、喝水或抽菸。

Do not eat, drink or smoke when using this product.

P271 只能在戶外或通風良好的地方使用。

Use only outdoors or in a well-ventilated area.

P280 穿戴防護手套/ 眼睛防護具/ 臉部防護具。

Wear protective gloves / eye protection / face protection.

應變 Response :

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P303+361+353 如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水清洗/沖洗皮膚。

IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing.

Rinse skin with water / shower.

P370+378 如果發生火災：使用 SDS 第 5 節中列出的滅火劑進行滅火。

In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

P301+317 若不慎吞食：取得緊急醫療幫助。

IF SWALLOWED: Get emergency medical help.

P330 漱口。

Rinse mouth.

P302+352 如皮膚沾染：用大量清水清洗。

IF ON SKIN: Wash with plenty of water.

P321 特殊處理(見本標示上的資訊)。

Specific treatment (see information on this label).

P361+P364 立即脫掉所有沾染的衣物，並在重複使用前清洗。

Take off immediately all contaminated clothing and wash it before reuse.

P305+351+338 如進入眼睛：用水小心清洗數分鐘。如隱形眼鏡可方便地取出，請取出隱形眼鏡，繼續清洗。

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P337+317 如仍覺眼睛有刺激：取得緊急醫療幫助。

If eye irritation persists: Get emergency medical help.

P332+317 如發生皮膚刺激：取得緊急醫療幫助。

IF SKIN irritation occurs: Get emergency medical help.

P304+340 若不慎吸入：移到空氣新鮮處，保持呼吸舒適的體位休息。

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P319 若感覺不舒服即取得醫療幫助。

Get medical help if you feel unwell.

P318 如果有暴露或擔心，請就醫。

If exposed or concerned, get medical advice.

儲存 Storage :

P403+233+235 存放在通風良好及陰涼的地方。保持容器密閉。

Store in a well-ventilated place and keep cool. Keep container tightly closed.

P405 加鎖存放。

Store locked up.

廢棄物處理 Disposal :

P501 按照當地/國家法規處置廢棄物及空容器。

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

其他危害 Other hazards :

1. 含有對人類可能致癌的成分。

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Contains ingredients that may be carcinogenic to humans.

2. 含有正在評估中可能為水生脊椎動物內分泌干擾物的成分。

Contains ingredients under assessment for possible aquatic vertebrates endocrine disrupting chemicals (EDCs).

3. 不太可能有生物蓄積，為完全可生物分解。

The bioaccumulation is unlikely. Readily biodegradable.

3、成份辨識資料 Composition / Information on Ingredients

化學性質 Chemical Characteristic：油性 PU 樹脂溶液 Solvent-based PU resin solution

危害成分中英文名稱 Chinese and English names of the Hazardous Ingredients	危害成分百分比 Hazardous Ingredient		CAS no.
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	43- 53%	80043、2400NC-B62500 中乾溶劑 Reducer	108-65-6
PU 樹脂 PU Resin	18 - 28%		26680-22-8
碳酸鈣 Calcium carbonate	0 - 6%		471-34-1
二乙基甲醯胺 Diethyl Formamide	6-12%		617-84-5
異氟爾酮 Isophorone	4 - 10%	83 慢乾溶劑 Retarder	78-59-1
二元酯 Dibasic ester (DBE) (二甲基戊酸酯 Dimethyl Glutarate · 二甲基己酸酯 Dimethyl Adipate · 二甲基琥珀酯 Dimethyl Succinate)	0 - 10%	9003 特慢乾溶劑 Retarder	1119-40-0 627-93-0 106-65-0
碳酸二甲酯 Dimethyl carbonate	0 - 10%		616-38-6

上述成份辨識資料(U)表示為添加少許抗 UV 劑。具體的化學特性和/或成分的確切百分比已作為商業機密予以保留。

The above ingredients identification data (U) is indicated by adding a little anti-UV agent. The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

非危害成分 Non-hazardous Ingredients：

依據 EC No. 1272/2008 CLP、GHS、EC No. 1907/2006 REACH 等法規及 ECHA 資料分類。

Classification according to EC No. 1272/2008 CLP, GHS, EC No. 1907/2006 REACH regulations & ECHA information.

成分 Ingredient	CAS no.	摘要 Summary	根據 Source
PU 樹脂 PU Resin	26680-22-8	根據 GHS 未分類為危險品。 Not classified as hazardous according to GHS. 根據已知或提供的信息，成分不存在毒性危害。 Ingredient does not present toxicity hazards based on known or supplied information. 根據各公司向 ECHA 提供的 REACH 註冊通知，尚未對危險進行分類。 According to the notifications provided by companies to ECHA in REACH registrations no hazards have been classified.	ECHA

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碳酸鈣 Calcium carbonate	471-34-1	<p>根據 GHS 未分類為危險品。 Not classified as hazardous according to GHS.</p> <p>向 REACH 註冊的 3401 家公司中有 3061 家報告稱不符合 GHS 危害標準。 Reported as not meeting GHS hazard criteria by 3061 of 3401 companies in REACH registrations.</p> <p>本產品為液態，不適用粒徑危害法規及不會產生此成分之初級粒徑粉體危害。 This product is in liquid state, particle size hazard regulations do not apply and will not cause primary particle size powder hazards of this ingredient.</p>	ECHA
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危害成分危害分類 Hazard Classification of the Hazardous Ingredients :

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Classification according to EC No. 1272/2008 CLP, GHS, EC No. 1907/2006 REACH regulations & ECHA information.

成分 Ingredient	CAS no.	危害分類 Hazard Class		危害訊息 Hazard statement		危害圖示 Pictograms, Signal Word
		分類 Class	級別 Cat.	代碼 Code	訊息 statement	
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	易燃液體 Flammable liquids	3	H226	易燃液體和蒸氣 Flammable liquid and vapor	 GHS02  GHS07 Warning
		嚴重損傷 / 刺激眼睛物質 Serious eye damage/eye irritation	2A	H319	造成嚴重眼睛刺激 Causes serious eye irritation	
		特定標的器官系統毒性物質 - 單一暴露 STOT - single exposure	3	H336	可能造成困倦或暈眩 May cause drowsiness or dizziness	
二乙基甲醯胺 Diethyl Formamide	617-84-5	易燃液體 Flammable liquids	3	H226	易燃液體和蒸氣 Flammable liquid and vapor	 GHS02  GHS07 Warning
		腐蝕 / 刺激皮膚物質 Skin corrosion/irritation	2	H315	造成皮膚刺激 Causes skin irritation	
		嚴重損傷 / 刺激眼睛物質 Serious eye damage/eye irritation	2A	H319	造成嚴重眼睛刺激 Causes serious eye irritation	
		特定標的器官系統毒性物質 - 單一暴露 STOT - single exposure	3	H335	可能造成呼吸道刺激 May cause respiratory irritation	
異佛爾酮 Isophorone	78-59-1	急毒性物質：吞食 Acute toxicity, oral	4	H302	吞食有害 Harmful if swallowed	 GHS07  GHS08
		急毒性物質：皮膚 Acute toxicity, dermal	4	H312	皮膚接觸有害 Harmful in contact with skin	
		致癌物質 Carcinogenicity	2	H351	懷疑致癌 Suspected of causing cancer	

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		特定標的器官系統毒性物質 - 單一暴露 STOT - single exposure	3	H335	可能造成呼吸道刺激 May cause respiratory irritation	Warning
		嚴重損傷 / 刺激眼睛物質 Serious eye damage/eye irritation	2A	H319	造成嚴重眼睛刺激 Causes serious eye irritation	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	急毒性物質：吞食 Acute toxicity, oral	4	H302	吞食有害 Harmful if swallowed	 GHS07 Warning
二甲基己酸酯 Dimethyl Adipate	627-93-0	嚴重損傷 / 刺激眼睛物質 Serious eye damage/eye irritation	2A	H319	造成嚴重眼睛刺激 Causes serious eye irritation	 GHS07 Warning
二甲基琥珀酸酯 Dimethyl Succinate	106-65-0	嚴重損傷 / 刺激眼睛物質 Serious eye damage/eye irritation	2A	H319	造成嚴重眼睛刺激 Causes serious eye irritation	 GHS07 Warning
碳酸二甲酯 Dimethyl carbonate	616-38-6	易燃液體 Flammable liquids	2	H225	高度易燃液體和蒸氣 Highly flammable liquid and vapor	 GHS02 Danger

Cat. : 級別 Category

STOT : 特定標的器官系統毒性物質 Specific target organ toxicity

毒理學資料 Toxicological Data :

成分 Ingredient	CAS no.	評估端點 Endpoint	暴露途徑 Route	物種 Species	閾值 Threshold	根據 Source
整體產品 Overall product	-	半致死劑量 LD50	吞食 Oral	鼠 Rat	>4500 mg/kg bw	ATE _{mix}
		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	>2000 ppm (4h)	
		半致死劑量 LD50	皮膚 Dermal	兔 Rabbit	>4500 mg/kg bw	
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	半致死劑量 LD50	吞食 Oral	鼠 Rat	6190 mg/kg bw	ECHA
		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	1883 ppm (4h)	
		半致死劑量 LD50	皮膚 Dermal	鼠 Rat	2000 mg/kg bw	
				兔 Rabbit	5000 mg/kg bw	
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	半致死劑量 LD50	吞食 Oral	鼠 Rat	1500 mg/kg bw	ECHA

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		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	7000 mg/m ³ air (4h)	
		半致死劑量 LD50	皮膚 Dermal	兔 Rabbit	1200 mg/kg bw	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	半致死劑量 LD50	吞食 Oral	鼠 Rat	5000 mg/kg bw	ECHA
		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	11 mg/L air (4h)	
		半致死劑量 LD50	皮膚 Dermal	鼠 Rat	2000 mg/kg bw	
二甲基己酸酯 Dimethyl Adipate	627-93-0	半致死劑量 LD50	吞食 Oral	鼠 Rat	5000 mg/kg bw	ECHA
		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	11 mg/L air (4h)	
		半致死劑量 LD50	皮膚 Dermal	鼠 Rat	5000 mg/kg bw	
二甲基琥珀酸酯 Dimethyl Succinate	106-65-0	半致死劑量 LD50	吞食 Oral	鼠 Rat	5000 mg/kg bw	ECHA
		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	11 mg/L air (4h)	
		半致死劑量 LD50	皮膚 Dermal	鼠 Rat	2000 mg/kg bw	
碳酸二甲酯 Dimethyl carbonate	616-38-6	半致死劑量 LD50	吞食 Oral	鼠 Rat	5000 mg/kg bw	ECHA
		半致死劑量 LC50	吸入 Inhalation	鼠 Rat	5.36 mg/L air (4h)	
		半致死劑量 LD50	皮膚 Dermal	鼠 Rat	2000 mg/kg bw	

ATE_{mix}：急毒性估計計算值 Acute toxicity estimate calculated value

ECHA：歐洲化學品管理局 European Chemicals Agency

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 Inhalation：

1. 施救前先做好自身的防護措施，以確保自己的安全。
Take self-protection measures before rescue to ensure rescuer's own safety.
2. 移走污染源或將患者移到空氣新鮮處。
Sources of pollution should be removed or move the patients to the place with fresh air.
3. 若呼吸停止立即由受訓過的人施以人工呼吸；若心跳停止施行心腹復蘇術。
If breathing stopped, artificial respiration should be imposed immediately by trained people; if cardiac arrest occurred, cardiopulmonary resuscitation (CPR) should be conducted.
4. 立即就醫。

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Immediate medical treatment/ Bring to the hospital immediately.

皮膚接觸 Skin Contact :

1. 必要時，戴防滲手套以避免觸及該化學物品。

If necessary, wear impervious gloves to avoid touching the chemical.

2. 以溫水緩和沖洗受污染不為 20 分鐘或直到污染物去除。

Rinse with warm water to ease pollution for 20 minutes or until the removal of pollutants.

3. 沖水中脫掉受污染衣物、鞋子或皮飾品。

During flushing with water, remove contaminated clothing, shoes or leather accessories.

4. 需將污染的衣服、鞋子以及皮飾品等均完全洗淨除汙後方可再用或丟棄。

Contaminated clothes, shoes and leather accessories need complete decontamination before re-use or discard.

眼睛接觸 Eye Contact :

1. 必要時，戴防滲手套以避免觸及該化學物品。

If necessary, wear impervious gloves to avoid touching the chemical.

2. 立即將眼皮撐開，用緩和流動的溫水沖洗污染的眼睛 20 分鐘或直到污染物去除。

Open eyes, rinse with warm water immediately to ease the pollution in the eyes for 20 minutes or until the removal of pollutants.

3. 避免清洗的污水流入未受影響的眼睛。

Prevent waste water from flowing into the unaffected eye.

4. 沖洗後若仍有刺激感，再反復沖洗。

After wash, if there is still a sense of stimulation, wash over and over again.

5. 立即就醫。

Immediate medical treatment/ Bring to the hospital immediately.

食入 Ingestion :

1. 若患者即將喪失意識、已失去意識或痙攣，不可經口餵食任何東西。

If the patient is about to lose consciousness, or already unconscious or having convulsions, anything must not be fed via mouth.

2. 若患者意識清楚，讓其用水徹底漱口。

If the patient is conscious, make him gargle with water completely.

3. 不可催吐。

No vomiting.

4. 讓患者喝下 240~300 毫升的水。

Make the patient drink 240 to 300 mL of water.

5. 立即就醫。

Immediate medical treatment, Bring to the hospital immediately.

最重要症狀及危害效應：高濃度蒸氣會引起抑制神經系統。

Major Disease and Harm Effect: Steam of high concentration will cause suppression of the nervous system.

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對急救人員之防護：應穿著 C 級防護裝備在安全區域實施急救。

First-Aid Personal Protection: C level protective gear should be taken in the implementation of the emergency procedure in the safe region.

對醫師之提示：吞食時,考慮洗胃、活性炭。

Prompt to Doctor: If swallowed, consider gastric lavage, or activated carbon.

5、滅火措施 Fire Fighting Measure

適用滅火劑：化學乾粉、泡沫、二氧化碳。

Suitable Extinguishing Media: Dry chemical, foam of carbon dioxide.

滅火時可能遭遇之特殊危害 Fire-fighting may face special hazards :

1. 可燃性液體，44℃ 以上會與空氣形成爆炸性混合物。
Flammable liquids, more than 44℃ to form an explosive mixture with air.
2. 蒸氣比空氣重會傳播至遠處，遇火源可能造成回火。
The vapor is heavier than air and will spread to distant ignition sources and flashback.
3. 會累積在低窪處增加燃燒和毒性之危害性。
Accumulate in low lying area increased combustion and toxicity of hazardous.
4. 火場中的容器受熱物可能會破裂。
The scene of containers may rupture due to heat.

特殊滅火程式 Special fire-fighting procedures :

1. 撤退並自安全距離或會受保護的地點滅火。
Retreat and fire-fighting from a safe distance or protected location.
2. 位於上風處以避免危險的蒸氣和有毒的分解物。
Stay at upwind to avoid hazardous vapors and toxic decomposition products.
3. 滅火前先阻止洩漏，如果不能阻止溢漏且周圍無任何危險，讓火燒完，若沒有阻止溢漏而先行滅火，蒸氣會與空氣形成爆炸性混合物而再引燃。
Stop the leak before extinguishing the fire, if you cannot prevent spills around without any danger, let the fire burn, if the leakage is not stopped first, vapors may form explosive mixtures with air and ignite.
4. 隔離未著火物質且保護人員。
Isolation the substances that are not on fire and protect personnel.
5. 安全情況下將容器搬離火場。
Move containers from fire under safe conditions.
6. 以水霧冷卻暴露火場的儲槽或容器。
Water mist to cool fire exposed tanks or containers.
7. 以水滅火可能無效，但可稀釋溢漏物並沖離引燃源。
Water fire may be ineffective, but can be diluted spills and washed from ignition sources.
8. 如果溢漏未引燃，噴水霧以分散蒸氣並保護試圖止漏的人員。
If the spillage is not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leakage.
9. 以水柱滅火無效。
Water stream is invalid.

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10. 大區域之大型火災，使用無人操作之水霧控制架或自動搖擺消防水瞄。

A large area of the large fire, use unmanned mist stand or automatic water fire.

11. 盡可能撤離火場並允許火燒完。

Withdrawal of fire site as possible and allow the fire to burn out.

12. 遠離儲槽。

Away from tanks.

13. 儲槽安全閥已響起或因著火而變色時立即撤離。

Tank safety valve has sounded or discoloration due to fire, evacuate immediately.

14. 未著特殊防護設備的人員不可進入。

Not enter without special protective equipment.

消防人員之特殊防護設備：消防人員必須配帶空氣呼吸器、防護手套、消防衣。

Special Protection Equipment: Firefighters must wear breathing apparatus, protective gloves and protective fire-fighting clothing.

6、洩漏處理方法 Accidental Release Measures

個人應注意事項 Should pay attention to personal matters :

1. 在污染區尚未完全清理乾淨前,限制人員接近該區。

Restrict personnel from the area in the contaminated area is cleaned up completely before.

2. 確定清理工作是由受過訓練的人員負責。

Ensure clean by trained personnel.

3. 穿戴適當的個人防護裝備。

Wear appropriate personal protective equipment.

環境注意事項 Environmental Precautions :

1. 對該區域進行通風換氣。

Ventilate area of leak or spill.

2. 撲滅或移走所有發火源，嚴禁吸煙。

Keep away from sources of ignition - no smoking.

3. 勿讓洩漏物進入下水道或污染水源及土壤。

Prevent product from entering drains. Do not contaminate surface water. Avoid subsoil penetration.

4. 重大洩漏發生時必須報告政府安全衛生與環保相關單位。

Report to the authorities if large leakage occurred.

清理方法 Methods for cleaning up :

1. 勿碰觸洩漏物。

Do not touch leak objects.

2. 在安全許可狀況下，設法阻止或減少洩漏。

In the security situation permits, trying to prevent or reduce leakage.

3. 在安全許可狀況下，將洩漏容器轉裝飾外或通風良好之隔離區，並將殘餘液裝在其他適當容器內。

If safety permits, the leaking container moved to the outdoor or well-ventilated quarantine, and the residue was installed in other suitable container.

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4. 避免外泄物進入下水道或密閉空間內。

To avoid leakage of materials into the sewer or in a confined space.

5. 小量溢漏：用惰性吸收劑吸起並置於加蓋且標示的適當容器內，再用水清洗洩漏區。

A small amount of spill: To absorb spill with inert absorbent and placed in suitable stamped and labeled container, and then with water to clean the leak area.

6. 大量洩漏：用沙、泥土或其他惰性物質圍堵洩漏並用幫浦或真空設備將液體抽入適當的容器內。殘餘液用惰性吸收劑吸收並置於加蓋且標示的適當容器內，用水清洗洩漏區。

Large Leak: Containment spill with sand, earth or other inert material, with pump or vacuum device to absorb the liquid and packed in a suitable container. Residue was absorbed with inert absorbent and placed in suitable stamped and labeled container, and then with water to clean the leak area.

7. 注意事項：已污染之吸收劑與外溢物具有同等的危害性。

Notes: The pollution spill with absorbent material has the same harm.

7、安全處置與儲存方法 Handling and Storage

處置 Handling :

1. 此物質是毒性和可燃性液體，作業時排氣機應運轉及善用個人防護具；工作人員應受適當有關物質之危險性及安全使用法之訓練。

This material is toxic and flammable liquid. Turn on exhausting equipment and use personal protective equipment during operation. Operators should receive appropriate training related to hazardous materials and safe usage.

2. 除去所有發火源並遠離熱及不相容物。

Remove all sources of ignition and keep away from heat and incompatible materials.

3. 工作區應有“禁止抽煙”標誌。

There should be “Smoking Prohibited or No Smoking” signs at work area.

4. 空的桶槽、容器和管線可能仍具危害性的殘留物，未清理前不得從事任何焊接、切割、鑽孔和其他熱的工作進行。

There may still be harmful residue in empty containers and pipelines. Any welding, cutting, drilling and other heat-related work must not be undertaken until the containers and pipelines are thoroughly cleaned.

5. 需隨時備有可用於滅火及處理溢漏的緊急應變設備。

Emergency equipment should be always prepared for fire-fighting and containment.

6. 作業避免產生霧滴或蒸氣，在通風良好的指定區內操作並採用最小使用量，操作區與儲存區分開。

Avoid formation of droplet or vapor during operation. Work in a well-ventilated and designated area and operate only the minimum amount. Storage and operating areas should be separated.

7. 必要時穿戴適當的個人防護設備以避免與此化學品或受污染的設備接觸。

Wear appropriate personal protective equipment in order to avoid direct contact with the chemicals and contaminated equipment.

8. 不要與不相容物一起使用(如強氧化劑)。

Do not use along with incompatible material (such as the strong oxidant).

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9. 使用相容物質製成的儲存容器，分裝時小心不要噴灑出來。
Store with compatible containers. Be careful to prevent splatter when repacking
10. 所有開啟、傾倒和混合的操作應位於上風處。
Any procedure involving opening, dumping and mixing should be in an up-wind area.
11. 不要將受污染的液體倒回原儲存的容器。
Do not pour the contaminated liquid back into the original storage containers.
12. 容器要標示，不使用時保持緊密並避免受損。
Containers should be labeled. Keep containers tightly closed when not in use and avoid damage.
13. 使用經認可的可燃性液體儲存容器和調配設備。
Use the approved liquid storage containers and mixing equipment.
14. 儲存於陰涼、乾燥、通風良好以及陽光無法直接照射的地方，遠離熱源、發火源及不相容物。
Store in cool, dry, well-ventilated area. Do not store in direct sunlight. Keep away from heat, source of ignition and incompatible material.
15. 儲存設備應以耐火材料構築。
Storage areas should be constructed with the fire-proof material.
16. 地板應以不滲透材料構築以免自地板吸收。
The floor should be made of non-seeping material to avoid floor absorption.

儲存 Storage :

1. 儲存區與工作區、飲食區或保護設備區應分開。
Work areas and storage areas, catering area or areas of protective equipment should be separated
2. 儲存區附近應有適當的滅火器和清理溢漏設備。
Storage area should be maintained with fire extinguisher and spill clean-up equipment.
3. 定期檢查儲存容器是否破損或溢漏及儲存物是否過期。
Periodically inspect the storage containers for any damage or spill and product expiration.
4. 檢查所有新進容器是否適當標示並無破損，更換破損容器，並隨時備有備用容器及標籤。
Inspect all newly delivered containers for the appropriate label and no damage. Replace the damage containers. Have a stock of replacement containers and labels readily available for use.
5. 以相容物製成的儲存容器裝溢漏物。
Use compatible storage container for the spillage.
6. 儲存區使用接地、不產生火花的通風系統，核可防爆設備及安全的電器系統。
Use grounded and non-sparking ventilation system in the storage area. The storage area should also have an approved explosion-proof equipment and security system.
7. 限量儲存。
Limit the stored volume.

8、暴露預防措施 Exposure Control/Personal Protection

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工程控制 Control Panel :

1. 排氣口直接通到室外
Exhaust direct to the outdoor
2. 供給充分新鮮空氣以補充排氣系統抽出的空氣
Adequate supply of fresh air to complement the exhaust system out of the air

控制參數 Control parameters

成分 Ingredient	CAS no.	八小時量 平均容許濃度 TWA 8-hour average concentration allowed		短時間時量 平均容許濃度 STEL Short amount of time to allow the average concentration		最高容許濃度 Ceiling Maximum allowable concentration		生物指標 BEIs Biological indicators	根據 Source
		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³		
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	100	541	150	811	-	-	-	OSHA
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	-	-	-	-	OSHA
異佛爾酮 Isophorone	78-59-1	25	140	-	-	-	-	-	OSHA
		-	-	-	-	5	28	-	ACGIH
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	-	-	-	-	OSHA ACGIH
二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	-	-	-	-	OSHA ACGIH
二甲基琥珀酸酯 Dimethyl Succinate	106-65-0	-	-	-	-	-	-	-	OSHA ACGIH
碳酸二甲酯 Dimethyl carbonate	616-38-6	-	-	-	-	-	-	-	OSHA ACGIH

ACGIH : 美國政府工業衛生師協會 American Conference of Governmental Industrial Hygienists

OSHA : 職業安全與衛生管理局 Occupational Safety and Health Administration

個人防護設備 Personal Protection Equipment :

• 呼吸防護 respiratory protection :

1. 625ppm 以下 : 連續流量型供氣式或含有機蒸氣濾毒罐的動力型空氣淨化式。
625ppm following: Continuous-flow gas or vapor canisters containing machine's power-air-purification.
2. 700ppm 以下 : 含有機蒸氣濾毒罐的動力型空氣淨化式或全面型化學濾罐式呼吸防護具、含有機蒸氣濾罐的防毒面罩、全面型自攜式或供氣式呼吸防護具。
700ppm following: Steam canisters containing machine's power to clean up the air-or full-chemical filtration tank respiratory protective equipment, steam machines contain anti-tank filter masks, full-or bring their own supply of

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protective breathing.

3. 未知濃度：正壓自吸式呼吸防護具、正壓全面型供氣式呼吸防護具輔以正壓自攜式呼吸防護具。

The concentration of the unknown: Suction pressure from the respiratory protective equipment, Positive overall type air-supplied respirator supplemented by positive-pressure self-contained breathing protection.

4. 逃生：含有機蒸氣濾毒罐之氣體面罩、逃生型自攜式呼吸防護具。

Escape: Steam machine containing canisters of gas masks, escape from the type of portable protective breathing with respiratory protection.

- 手部防護：丁基橡膠、4H、聚乙烯醇等防滲手套。

Hand Protection: Butyl rubber, 4H, polyvinyl alcohol, and other impervious gloves.

- 眼睛防護：化學安全護目鏡、護面罩。

Eye Protection: Safety goggles or full-face shield.

- 皮膚及身體防護：上述橡膠材質連身式防護衣、工作靴、安全淋浴設備。

Skin & Body Protection: Technology of the above-protective clothing, work boots, safety showers.

衛生措施 Hygiene Procedures :

1. 工作後盡速脫掉污染衣物，洗淨後才可再穿戴或丟棄，且須告知洗衣人員污染之危害性。

Take off contaminated clothing as soon as possible after work and wash before wearing again or discard. Inform the laundry staff of the danger of pollution.

2. 工作場所嚴禁抽煙或飲食。

Smoking and food is prohibited in the workplace.

3. 處理此物後，須徹底洗手。

Wash hands thoroughly after handling.

4. 維持作業場所清潔。

Maintain a clean workplace.

9、物理及化學性質 Physical and Chemical Properties/Characteristics

外觀(顏色、狀態)：白霧糊狀液體 Appearance (color, state): Mist paste liquid	氣味：甜甜的醚類氣味 Odor: Sweet ether-like.
嗅覺閾值：- Odor threshold: -	熔點：- Melting point: -
pH 值：近乎中性 pH value: Close to neutral	沸點/沸點範圍：146°C (PMA) Boiling Point/Boiling Range: 146°C (PMA)
易燃性(固體,氣體)：100% Flammability (solid, gas): 100%	閃火點：46°C (依 PMA) 測試方法：()開杯 (V)閉杯
分解溫度：- Decomposition Temperature: -	Flash Point: 46°C (from PMA) Test Method: () Open Cup (V) Close Cup
自燃溫度：420 - 427°C Spontaneous Temperature : 420 - 427°C	爆炸界限：1.5% - 7% Explosive Limits: 1.5% - 7%

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蒸氣壓 : - Vapor Pressure : -	蒸氣密度 : - Vapor Density : -
比重 : 1.04 (水 = 1) Specific Gravity: 1.04 (Water=1)	溶解度 : 不溶于水 Solubility in Water: Insoluble in water
辛醇/水分配係數 : - Log Kow: -	揮發速率 : - Vaporization Rate: -
揮發性有機化合物 Volatile Organic Compounds (VOC) : 69 - 79%	

10、安定性及反應性 Stability and Reactivity

安定性：正常狀況下安定。

Stability: Stable under ordinary conditions

特殊狀況下可能之危害反應 Possible Hazardous Reaction under Special Conditions :

1. 氧化劑(如過氧化物、硝酸鹽、過氯酸鹽):增加火災、爆炸的危險。

Oxidants (for example, peroxide, nitrate, perchlorate): Increase chances of fire and explosion.

2. 強酸、強鹼：引起反應並產生熱及壓力。

Strong acid: Reaction with strong acid and strong alkali will produce heat and pressure.

應避免之狀況：避開過熱、火焰、火花、靜電及其他引火源。避免和不相容物質共存。

Conditions to avoid: Avoid overheating, Should be kept away from flame, sparks, static electricity, other ignition sources and incompatible materials.

應避免之物質：強酸、含氯化溶劑、強鹼、氧化劑。

Incompatibility: Strong acid, chlorinated solvent, strong alkali and oxidants.

危害分解物 Hazardous Decomposition Products : -

11、毒性資料 Toxicological Information

如果主管當局規定了特定成分的分類，則以下信息可能與第 2 節中的本產品分類不一致。此外，單獨成分的毒理學數據可能不會呈現在本產品分類和 (或) 暴露的體徵和症狀中，因為該成分的閾值可能低於標籤之標示量、也可能不會有暴露問題，或者該數據可能與整個產品訊息無關。

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

暴露途徑/ 症狀 Exposure means / Symptoms :

根據成份上的試驗數據和/或資料得知，本產品可能會對健康產生以下影響。

Based on test data and/or information on the components, this material may produce the following health effects.

皮膚 Skin Contact :

1. 其液體會造成中度至嚴重的刺激，視濃度而定。

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The liquid can cause moderate to severe irritation, depending on the concentration.

2. 曾經皮膚吸收引起抑制中樞神經系統的症狀如吸入所述。

Will be absorbed by skin and cause same central nervous system symptoms like which described in inhalation.

吸入 Inhalation :

1. 暴露時間 3~5 分鐘：75ppm 會刺激鼻子和喉嚨，50ppm 會刺激喉嚨，25ppm 沒有感覺。

Exposure time from 3 to 5 minutes. 75ppm: Cause nose and throat irritation. 50ppm: Cause throat irritation. 25ppm: No symptom.

2. 高濃度蒸氣會引起抑制神經系統，如頭痛、噁心、頭暈、嗜睡和精神混淆。

High concentrations of vapor will cause nervous system depression, such as headache, nausea, dizziness, lethargy and mental confusion.

3. 非常高濃度可能引起喪失意識和死亡。

Very high concentrations may cause loss of consciousness and death.

食入：食入大量溶劑可能引起抑制中樞神經系統的症狀如吸入所述。

Ingestion: High volume ingestion can cause central nervous system symptoms as caused by inhalation.

眼睛：蒸氣會刺激眼睛。液體濺入眼睛可能會引起刺激和酸痛，並可能造成可逆性損傷。

Eye Contact: Vapor can cause eyes irritation. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

皮膚腐蝕/ 刺激性：刺激性。

Skin corrosion/ Irritation: Irritating.

眼睛腐蝕/ 刺激性：刺激性。

Eye corrosion/ Irritation: Irritating.

呼吸腐蝕/ 刺激性：刺激性。

Respiratory corrosion/ Irritation: Irritating.

皮膚致過敏性：不致敏。

Skin sensitization: Not sensitizing.

呼吸致過敏性：不致敏。

Respiratory sensitization: Not sensitizing.

遺傳毒性/ 致突變性/ 致畸形：未觀察到不良影響 (陰性)。

Genetic toxicity/ Mutagenicity/ Teratogenicity: No adverse effect observed (negative).

生殖毒性：有數據，不認為具有生殖毒性。

Toxicity to reproduction: Available data, not considered to be reproductively toxic.

致癌性：含有對人類可能致癌的成分。

Carcinogenicity: Contains ingredients that may be carcinogenic to humans.

內分泌干擾性：未含有對哺乳類之內分泌干擾物。

Endocrine disrupting properties: Contains no mammalian endocrine disrupting chemicals (EDCs).

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長期暴露：查無可用資料。

Chronic exposure: No information available.

毒理學資料 Toxicological Data :

如果某一個組成被公開在第 3 節，但沒有出現在下列表格中，代表現階段沒有數據可用或該數據不足以進行分類。

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

皮膚腐蝕/ 刺激/ Skin Corrosion/ Irritation :

成分 Ingredient	CAS no.	暴露途徑 Route	研究結果 Study results with study data	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	皮膚 Skin	觀察到不良反應 (刺激性) Adverse effect observed (irritating)	ECHA
		眼睛 Eye	觀察到不良反應 (刺激性) Adverse effect observed (irritating)	
		呼吸 Respiratory	觀察到不良反應 (刺激性) Adverse effect observed (irritating)	
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	皮膚 Skin	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	ECHA
		眼睛 Eye	觀察到不良反應 (刺激性) Adverse effect observed (irritating)	
		呼吸 Respiratory	觀察到不良反應 (刺激性) Adverse effect observed (irritating)	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	皮膚 Skin	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	ECHA
		眼睛 Eye	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	
		呼吸 Respiratory	-	
二甲基己酸酯 Dimethyl Adipate	627-93-0	皮膚 Skin	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	ECHA
		眼睛 Eye	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	
		呼吸 Respiratory	-	
二甲基琥珀酯 Dimethyl Succinate	106-65-0	皮膚 Skin	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	ECHA
		眼睛 Eye	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	

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		呼吸 Respiratory	-	
碳酸二甲酯 Dimethyl carbonate	616-38-6	皮膚 Skin	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	ECHA
		眼睛 Eye	沒有觀察到不良影響 (不刺激) No adverse effect observed (not irritating)	
		呼吸 Respiratory	-	

呼吸過敏性 Respiratory Sensitization :

成分 Ingredient	CAS no.	暴露途徑 Route	研究結果 Study results with study data	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	皮膚 Skin	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	ECHA
		呼吸 Respiratory	沒有可用的研究資料 No study available	
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	皮膚 Skin	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	ECHA
		呼吸 Respiratory	沒有可用的研究資料 No study available	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	皮膚 Skin	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	ECHA
		呼吸 Respiratory	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	
二甲基己酸酯 Dimethyl Adipate	627-93-0	皮膚 Skin	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	ECHA
		呼吸 Respiratory	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	
二甲基琥珀酸酯 Dimethyl Succinate	106-65-0	皮膚 Skin	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	ECHA
		呼吸 Respiratory	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	
碳酸二甲酯 Dimethyl carbonate	616-38-6	皮膚 Skin	沒有觀察到不良影響 (不致敏) No adverse effect observed (not sensitizing)	ECHA
		呼吸 Respiratory	-	

重複暴露毒性 Repeated Dose Toxicity :

成分 Ingredient	CAS no.	暴露途徑 Route	物種 Species	閾值 Threshold	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol	108-65-6	吞食 Oral	鼠 Rat	NOAEL 1000 mg/kg bw/day (亞慢毒性 subchronic)	ECHA

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Monomethyl Ether Acetate		皮膚 Dermal	兔 Rabbit	NOAEL 2675 mg/kg bw/day (亞慢毒性 subchronic)	
		吸入 Inhalation	鼠 Rat	NOAEC 1650 mg/m ³ (亞慢毒性 subchronic)	
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	吞食 Oral	鼠 Rat	NOAEL 102.5 mg/kg bw/day (亞慢毒性 subchronic)	ECHA
		吸入 Inhalation	鼠 Rat	LOAEC 208 mg/m ³ (亞急性毒性 subacute)	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	ECHA
二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	ECHA
二甲基琥珀酯 Dimethyl Succinate	106-65-0	-	-	-	ECHA
碳酸二甲酯 Dimethyl carbonate	616-38-6	吞食 Oral	鼠 Rat	NOAEL 500 mg/kg bw/day (亞慢毒性 subchronic)	ECHA
		吸入 Inhalation	鼠 Rat	-	

NOAEL : No Observed Adverse Effect Level 未觀察到不良影響最高劑量

NOAEC : No Observed Adverse Effect Concentration 未觀察到不良反應濃度

LOAEC : Lowest Observed Adverse Effect Concentration 可觀察到不良效應之最低濃度

遺傳毒性/ 致突變性/ 致畸形 Genetic toxicity/ Mutagenicity/ Teratogenicity :

成分 Ingredient	CAS no.	暴露途徑 Route	物種 Species	研究結果 Study results with study data	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	體外 In Vitro	-	未觀察到不良影響 (陰性) No adverse effect observed (negative)	ECHA
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	體外 In Vitro	-	未觀察到不良影響 (陰性) No adverse effect observed (negative)	ECHA
		體內 In Vivo	-	未觀察到不良影響 (陰性) No adverse effect observed (negative)	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	ECHA
二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	ECHA
二甲基琥珀酯 Dimethyl Succinate	106-65-0	-	-	-	ECHA

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碳酸二甲酯 Dimethyl carbonate	616-38-6	-	-	-	ECHA
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生殖毒性/ 生長發育的影響 Toxicity to reproduction/ Developmental Effects :

成分 Ingredient	CAS no.	暴露途徑 Route	物種 Species	閾值 Threshold	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	吞食 Oral	鼠 Rat	NOAEL 1000 mg/kg 生育力 on fertility	ECHA
		吸入 Inhalation	鼠 Rat	NOAEC 5400 mg/m ³ 生育力 on fertility	
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	吞食 Oral	-	-	ECHA
		吸入 Inhalation	鼠 Rat	NOAEC 2873 mg/m ³ on fertility 生育力 LOAEC 289 mg/m ³ on development 發育	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	ECHA
二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	ECHA
二甲基琥珀酯 Dimethyl Succinate	106-65-0	吞食 Oral	-	-	ECHA
		吸入 Inhalation	鼠 Rat	NOAEC 296 mg/m ³ on fertility 生育力 NOAEC 1000 mg/m ³ on development 發育	
碳酸二甲酯 Dimethyl carbonate	616-38-6	-	-	-	ECHA

致癌性 Carcinogenicity :

成分 Ingredient	CAS no.	暴露途徑 Route	物種 Species	研究結果 Study results with study data	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	吸入 Inhalation	鼠 Rat	NOAEC 11058 mg/m ³ (chronic) 慢性	ECHA
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	
異佛爾酮 Isophorone	78-59-1	-	-	Group 2B - 對人類可能致癌。 Possibly carcinogenic to humans.	IARC
				A3 - 已確認動物致癌物，與人類的相關性未知。 Confirmed animal carcinogen with unknown relevance to humans.	ACGIH
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	IARC/ ACGIH

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二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	
二甲基琥珀酯 Dimethyl Succinate	106-65-0	-	-	-	
碳酸二甲酯 Dimethyl carbonate	616-38-6	-	-	-	

IARC : 國際癌症研究署 International Agency for Research on Cancer

ACGIH : 美國政府工業衛生師協會 American Conference of Governmental Industrial Hygienists

內分泌干擾性 Endocrine disrupting properties :

成分 Ingredient	CAS no.	模式 Model	物種 Species	評估端點 Endpoint	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	-	-	-	ECHA
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	-	-	-	ECHA
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	ECHA
二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	ECHA
二甲基琥珀酯 Dimethyl Succinate	106-65-0	-	-	-	ECHA
碳酸二甲酯 Dimethyl carbonate	616-38-6	-	-	-	ECHA

12、生態資料 Ecological Information

如果主管當局規定了特定成分的分類，則以下信息可能與第 2 節中的本產品分類不一致。此外，單獨成分的毒理學數據可能不會呈現在本產品分類和 (或) 暴露的體徵和症狀中，因為該成分的閾值可能低於標籤之標示量、也可能不會有暴露問題，或者該數據可能與整個產品訊息無關。

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

生態毒性：被認為對水生生物無害。

Eco-toxicity: Considered not harmful to aquatic life.

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持久性及降解性 Persistence and degradability :

1. 根據試驗顯示，會很快速生物分解。

According to the tests, this substance is rapidly biodegradable.

2. 當釋放至水中，預期會慢慢揮發及進行生物分解。

When released to water, it is expected to vaporize slowly and be biodegradable.

3. 當釋放至大氣中，預期會與氫氧自由基反應。

When released to the atmosphere, it will react with hydroxyl free radical.

生物蓄積性：不太可能蓄積。完全可生物分解。

Bioaccumulation: The accumulation is unlikely. Readily biodegradable.

土壤中之流動性：當釋放至土壤中，預期會揮發及進行生物分解。

The mobility in soil: When released to soil, is expected to vaporize and be biodegradable.

內分泌干擾性：含有正在評估中可能為水生脊椎動物內分泌干擾物的成分。

Endocrine disrupting properties: Contains ingredients under assessment for possible aquatic vertebrates endocrine disrupting chemicals (EDCs).

其他不良效應：-

Other harmful effects: -

毒理學資料 Toxicological Data :

水生生態毒性/ 生物蓄積性 Aquatic toxicity/ Bioaccumulation :

成分 Ingredient	CAS no.	物種 Species	毒性 Toxicity	評估端點 Endpoint	蓄積性 BCF	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	魚 Fish	急毒性 Acute	LC50 (4 days) 100 mg/L NOEC (4 days) 100 mg/L	-	ECHA
			慢毒性 Chronic	NOEC (14 days) 47.5 mg/L LC50 (14 days) 63.5 mg/L		
		無脊椎動物 Invertebrates	急毒性 Acute	EC50 (48 h) 500 mg/L		
			慢毒性 Chronic	NOEC (21 days) 100 mg/L EC50 (21 days) 100 mg/L		
		藻類/ 藍細菌 Algae/ Cyanobacteria	急毒性 Acute	EC50 (4 days) 1 g/L NOEC (4 days) 1 g/L LOEC (4 days) 1 g/L		
		微生物 Microorganisms	急毒性 Acute	NOEC (30 min) 1 g/L		
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	魚 Fish	急毒性 Acute	LC50 (4 days) 140 mg/L EC50 (4 days) 217 mg/L	7	ECHA
			慢毒性 Chronic	NOEC (35 days) 11 mg/L LOEC (35 days) 19 mg/L		

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		無脊椎動物 Invertebrates	急毒性 Acute	EC50 (48 h) 224 mg/L LC50 (48 h) 120 mg/L LC50 (24 h) 430 mg/L NOEC (48 h) 15 mg/L		
			慢毒性 Chronic	NOEC (21 days) 23.2 mg/L LOEC (21 days) 47.6 mg/L EC50 (21 days) 34.2 mg/L LC50 (21 days) 43.5 mg/L		
		藻類/ 藍細菌 Algae/ Cyanobacteria	急毒性 Acute	NOEC fresh water 64 mg/L NOEC marine water 29.9 mg/L		
		微生物 Microorganisms	急毒性 Acute	EC50 100 mg/L NOEC 435 mg/L		
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	魚/ 無脊椎動物 Fish/ Invertebrates	急毒性 Acute	-	-	ECHA
		藻類/ 藍細菌 Algae/ Cyanobacteria	急毒性 Acute	NOEC fresh water 36 mg/L		
二甲基己酸酯 Dimethyl Adipate	627-93-0	魚/ 無脊椎動物 Fish/ Invertebrates	急毒性 Acute	-	-	ECHA
		藻類/ 藍細菌 Algae/ Cyanobacteria	急毒性 Acute	NOEC fresh water 36 mg/L		
二甲基琥珀酯 Dimethyl Succinate	106-65-0	魚 Fish	急毒性 Acute	LC50 (4 days) 50 mg/L LOEC (4 days) 50 mg/L	3.16 L/kg ww	ECHA
		無脊椎動物 Invertebrates	急毒性 Acute	EC50 (48 h) 100 mg/L EC50 (24 h) 100 mg/L LC50 (48 h) 458.8 mg/L		
		藻類/ 藍細菌 Algae/ Cyanobacteria	急毒性 Acute	EC50 fresh water 100 mg/L NOEC fresh water 100 mg/L		
		微生物 Microorganisms	急毒性 Acute	EC50 1 g/L		
碳酸二甲酯 Dimethyl carbonate	616-38-6	魚 Fish	急毒性 Acute	LC50 (4 days) 100 mg/L	-	ECHA
		無脊椎動物 Invertebrates	急毒性 Acute	EC50 (48 h) 100 mg/L		
		藻類/ 藍細菌 Algae/ Cyanobacteria	急毒性 Acute	EC50 (72 h) 100 mg/L NOEC (72 h) 100 mg/L		
		微生物 Microorganisms	急毒性 Acute	EC50 (3 h) 1 g/L		

BCF：生物濃縮係數 Bioaccumulation Factor

EC50：半致效應濃度 Median Effect Concentration

NOEC：未觀察到效應濃度 No Observed Effect Concentration

LOEC：最低觀察到效應濃度 Lowest Observed Effect Concentration

環境歸宿和途徑/ 生物降解 Environmental fate and pathways/ Biodegradation：

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成分 Ingredient	CAS no.	途徑 Pathway	評估端點 Endpoint	閾值 Threshold	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	水中生物降解 Bd. in water	篩選試驗 Screening tests	完全可生物分解 100% Readily biodegradable	ECHA
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	空氣中光降解 Pt. in air	半衰期 Half-life	23 min	ECHA
		水中生物降解 Bd. in water	篩選試驗 Screening tests	完全可生物分解 100% Readily biodegradable	
		土壤生物降解 Bd. in soil	半衰期 Half-life	-	
二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	水中生物降解 Bd. in water	篩選試驗 Screening tests	完全可生物分解 100% Readily biodegradable	ECHA
		土壤生物降解 Bd. in soil	半衰期 Half-life	-	
二甲基己酸酯 Dimethyl Adipate	627-93-0	水中生物降解 Bd. in water	篩選試驗 Screening tests	完全可生物分解 100% Readily biodegradable	ECHA
		土壤生物降解 Bd. in soil	半衰期 Half-life	-	
二甲基琥珀酯 Dimethyl Succinate	106-65-0	空氣中光降解 Pt. in air	半衰期 Half-life	14 days	ECHA
		水中生物降解 Bd. in water	篩選試驗 Screening tests	完全可生物分解 100% Readily biodegradable	
		土壤生物降解 Bd. in soil	半衰期 Half-life	30 days @ 25 °C	
碳酸二甲酯 Dimethyl carbonate	616-38-6	水中生物降解 Bd. in water	篩選試驗 Screening tests	完全可生物分解 100% Readily biodegradable	ECHA

Pt. : 光降解 Phototransformation

Bd. : 生物降解 Biodegradation

內分泌干擾性 Endocrine disrupting properties :

成分 Ingredient	CAS no.	模式 Model	物種 Species	評估端點 Endpoint	根據 Source
丙二醇甲醚乙酸酯 Propylene Glycol Monomethyl Ether Acetate	108-65-6	-	-	-	ECHA
二乙基甲醯胺 Diethyl Formamide	617-84-5	-	-	-	ECHA
異佛爾酮 Isophorone	78-59-1	體內 In vivo	水生脊椎動物 Aquatic vertebrates	NOEC (21 days) 748 - 79800 µg/L 評估中 Under assessment	ECHA

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二甲基戊酸酯 Dimethyl Glutarate	1119-40-0	-	-	-	ECHA
二甲基己酸酯 Dimethyl Adipate	627-93-0	-	-	-	ECHA
二甲基琥珀酸酯 Dimethyl Succinate	106-65-0	-	-	-	ECHA
碳酸二甲酯 Dimethyl carbonate	616-38-6	-	-	-	ECHA

13、廢棄處置方法 Disposal considerations

廢棄處置方法：將容器密閉以避免洩漏，並於容器外觀標示清楚為『可燃性液體』，依據『有害事業廢棄物清理法』交合格的廢棄物清理公司處理。

Disposal Information: Seal the container tightly to prevent leak or spill. In case of incineration, follow the disposal standard of industrial waste. Consign the disposal to the specialist of industrial waste after clarifying that the goods are flammable waste oil.

14、運送資料 Transport Information

組織 Organization	IATA/ ICAO	IMDG	ADR/ RID
聯合國編號 UN Code	1210	1210	1210
國際運輸名稱 International Transport Name	印刷油墨 Printing Ink	印刷油墨 Printing Ink	印刷油墨 Printing Ink
運輸危害分類 Hazard Class	3	3	3
包裝類別 Packing Group	III	III	III
海洋污染物(是/否) Marine pollutants (Yes / No)	No	No	No
特殊運送方法及注意事項- Special Transport Way and Note	無鑑別資訊 None identified	無鑑別資訊 None identified	無鑑別資訊 None identified

UN：聯合國 United Nations

IATA：國際航空運輸協會 International Air Transport Association

ICAO：國際民航組織 International Civil Aviation Organization

IMDG：國際海運危險品準則 International Maritime Dangerous Goods

ADR：歐洲危險品國際道路運輸協定 European Agreement concerning the International Carriage of Dangerous Goods by Road

RID：危險品國際鐵路運輸條例 Regulation concerning the International Carriage of Dangerous Goods by Rail

15、法規資料 Regulation Information

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適用法規 Application of Regulation :

化學品全球調和制度

Globally Harmonized System (GHS)

職業安全衛生法則中的 ANSI Z400.1 - 2004 規範

ANSI Z400.1 - 2004 Specification in Occupational Safety and Health Act (OSH Act)

職業安全與衛生管理局 29 CFR 1910.1200 危害通識標準

OSHA 29 CFR 1910.1200 Hazard Communication Standard (HCS 2012)

EC No. 1272/2008 分類標示包裝法規

EC No. 1272/2008 Classification, Labelling and Packaging Regulation (CLP)

EC No. 1907/2006 化學品註冊、評估、授權及限制法規

EC No. 1907/2006 Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
(EU) 2020/878 條例：歐盟 SDS 新要求

Regulation (EU) 2020/878: New Requirements for EU SDS

有機溶劑中毒預防規則

Toxication Prevention Regulation for Organic Solvent

勞工作業場所容許暴露標準

Standards of Permissible Exposure Limits at Job Site

道路交通安全規則

Traffic Safety Regulation

事業廢棄物貯存清除處理方法及設施標準

Storage & Disposal Procedures and Facility Standard for Industrial Waste

16、其他資料 Other Information

參考文獻 Reference	<ol style="list-style-type: none">1. 勞動部職業安全衛生署 GHS 化學品全球調和制度網站 Department of Occupational Safety and Health, GHS Chemical Global Harmonization System website (https://ghs.osha.gov.tw/CHT/masterpage/index_CHT.aspx)2. 行政院環境保護署毒物及化學物質局網站 The website of the Toxic and Chemical Substances Bureau, EPA, Executive Yuan (https://flora2.epa.gov.tw/ToxicC/Query/database.aspx)3. 歐洲化學品管理局網站 The website of the European Chemicals Agency (ECHA). (https://echa.europa.eu/)4. 美國政府工業衛生師協會網站 The website of the American Conference of Governmental Industrial Hygienists (ACGIH). (https://www.acgih.org/data-hub-2022/)5. 職業安全與衛生管理局網站 The website of the Occupational Safety and Health Administration (OSHA). (https://www.osha.gov/annotated-pels/table-z-1)6. 國際癌症研究署網站 The website of the International Agency for Research on Cancer (IARC).
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	(https://monographs.iarc.who.int/list-of-classifications/)				
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文件編號 Document No.	NCA-00	版次 Version	1	文件類別 Document type	
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