

## 一、前言

長江化學股份有限公司為台灣長春集團與日本 ADEKA 株式會社於 1989 年所合資成立之專業塑膠添加劑銷售公司。並於 2004 年為推廣產品與提供市場所需之技術與服務，再次成立長連旭 (上海) 貿易有限公司。除代理銷售長春集團之塑膠添加劑亦代理 ADEKA 相關產品，以提供客戶最好的產品與最佳服務。

ADEKA 為世界馳名之專業添加劑生產廠商，除與長春集團合作之外，並於世界各地生產各種高性能添加劑如特殊抗氧化劑、成核劑、金屬去活性劑、紫外線吸收劑、光安定劑、難燃劑、特殊可塑劑與環保型 PVC 安定劑等系列產品。

長春集團自 1949 年成立之後，一直秉持品質、服務、創新的宗旨，生產及行銷各類樹脂、一般化學品、電子化學品及特用化學品。相當重視技術研發，且產品品質優良穩定，所以能夠受到國內外客戶的肯定與支持。

長春集團引進 ADEKA 先進的技術生產塑膠添加劑，加上高度自動化的生產設備及製程，讓客戶能降低成本並提昇產品品質。冀望能藉由專業的銷售公司提供客戶完善的技術服務及品質優良而穩定的產品。

### I. Foreword

Chang Chiang Chemical Co., Ltd. is a professional plastics additives sales company set up in 1989 as a JV of Chang Chun group in Taiwan and ADEKA Corporation in Japan. A branch in Shanghai was established in 2004 to enhance the product promotion in China. Chang Chiang Chemical serves as the exclusive sales representative for plastic additives manufactured by Chang Chun group and ADEKA as well.

ADEKA is a worldwide reputable plastic additives manufacturer. ADEKA produces and offers a wide variety of high performance additives all over the world, including special Antioxidant, Nuclear agent, UV absorber, Light stabilizer, Flame retardant, Metal deactivator, special Plasticizer and PVC stabilizer etc.

Chang Chun Group is a global leader in the production of commodity chemicals as well as specialty materials which are used widely in most major industries. Chang Chun has facilities in Taiwan, China, Malaysia, Indonesia and South Africa and is well known for its strength in R&D, operational technology superiority and relentless pursuit for excellence.

Chang Chun produces plastics additives at a state-of-the-art and fully automatic facilities in Miaoli, Taiwan. The manufacturing technology is licensed by ADEKA Corporation. Chang Chiang Chemical, supported by two reputed and highly technology-oriented companies in Asia, staffed with professional marketing and technical personnel, is poised to provide the customers the best technical services and consistently high quality products.



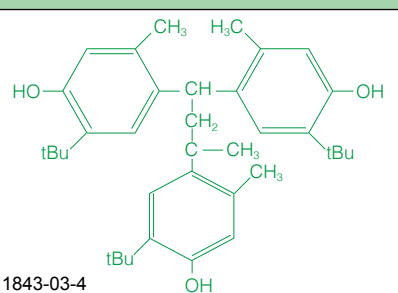
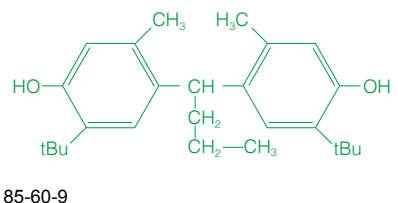
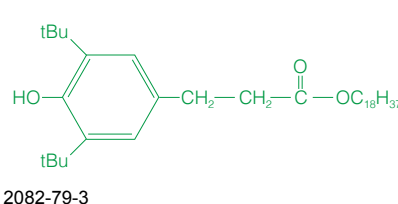
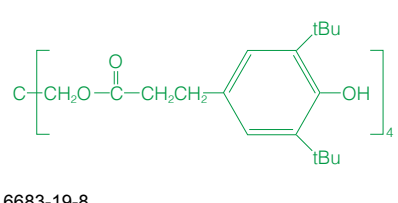
## 二、產品簡介

### (一) 抗氧化劑 (Antioxidant)

抗氧化劑是塑膠、樹脂及橡膠等產品不可或缺的重要添加劑，應用的對象包括：ABS、PS、PVC、PE、PP、工程塑膠、PU 樹脂、接著劑、橡膠與日常及工業上的許多產品。由於這些產品在加工及儲放過程中，會受到光、熱、金屬及氧的作用，以致物性降低，失去應用價值。抗氧化劑的功能在於防止或延遲因氧化而造成的物性變化，確保產品的加工性與使用壽命。

長春的抗氧化劑主要可分為受阻酚系 (Hindered Phenols)、混合型 (Blend) 與亞磷酸酯系 (Phosphites)。

#### 1. 受阻酚系抗氧化劑 (Hindered Phenol Antioxidants)

ADK STAB	化學結構 CAS No.	性質	特性	應用	F.P.A.	包裝
AO-30	 1843-03-4	白色粉末 熔點 186°C 分子量 545	高效能抗氧化劑 與硫代醚有良好的相乘 增效作用 具優異的抗萃取性	聚烯烴 ABS 一般塑膠	*	20 公斤 紙袋裝
AO-40	 85-60-9	白色粉末 熔點 210°C 分子量 383	高效能抗氧化劑 與硫代醚有良好的相乘 增效作用 具優異的抗萃取性	ABS 橡膠	*	20 公斤 紙袋裝
AO-50 AO-50F AO-50RG	 2082-79-3	白色粉末 白色片狀 白色顆粒 熔點 50°C 分子量 531	有效抗氧化劑 可取代 BHT 與高分子相容性佳	所有塑膠 彈性體	*	40 公斤 紙箱裝 / 20 公斤 紙袋裝
AO-60 AO-60RG	 6683-19-8	白色粉末 白色顆粒 熔點 115°C 分子量 1178	高效多用途抗氧化劑	所有塑膠 彈性體 纖維	*	20 公斤 紙袋裝

F.P.A.：適合在食品包裝用途。

\*：符合 JHOSPA 及 FDA 之要求

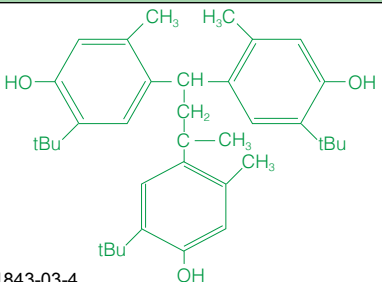
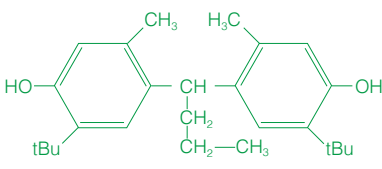
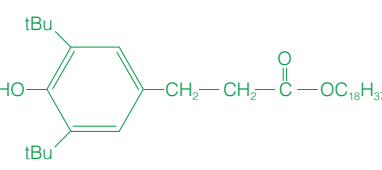
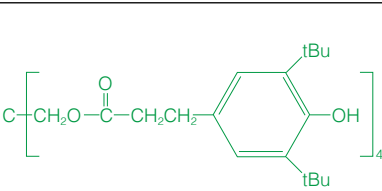
## II 、 Products Introduction

### ( I ) Antioxidant

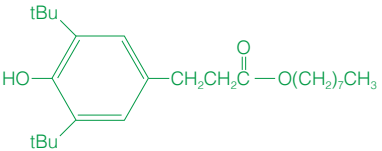
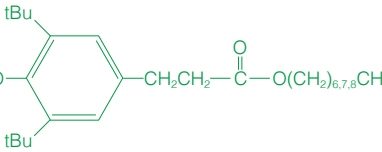
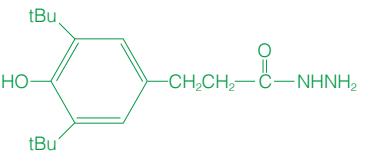
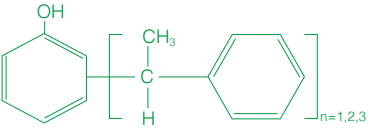
Antioxidants are the most important additives to the products like Plastics, Resins, and Rubbers. The applicable products include ABS, PS, PVC, PE, PP, Engineering Plastics, PU resins, Adhesives, Rubber for many daily and industrial use goods. Because these products can be deprived their properties and lost their utilizing value by affection of light, heat, metal and oxygen. The purpose of Antioxidants is to prevent or delay the oxidation to secure processing and utilization quality of the products.

Chang Chun's Antioxidants have three major categories of Hindered Phenols and A Blend and Phosphites.

#### 1. Hindered Phenol Antioxidants

ADK STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
AO-30	 1843-03-4	White Powder M.P.186°C M.W.545	Highly effective antioxidant Excellent synergism with thioethers Extraction resistance	Polyolefins ABS and Others	*	20KG Bag
AO-40	 85-60-9	White Powder M.P.210°C M.W.383	Highly effective antioxidant Excellent synergism with thioethers Extraction resistance	ABS and Rubbers	*	20KG Bag
AO-50 AO-50F AO-50RG	 2082-79-3	White Powder White Flake White Granule M.P.50°C M.W.531	Effective antioxidant Substitute for BHT Good compatibility with polymers	All Plastics Elastomers	*	40KG Carton / 20KG Bag
AO-60 AO-60RG	 6683-19-8	White Powder White Granule M.P.115°C M.W.1178	Versatile and highly effective antioxidant	All Plastics Elastomers & Fibers	*	20KG Bag

F.P.A. : Food Packing Application      \* : JHOSPA registered & Listed in FDA' CFR

CCP STAB	化學結構 CAS NO.	性質	特性	應用	F.P.A.	包裝
390	 144429-84-5	透明液體 黏度 375cps 分子量 390	多功能抗氧化劑 液體產品，分散性佳	所有塑膠 彈性體 纖維		190 公斤 鐵桶
390E	 125643-61-0	透明液體 黏度 375cps 分子量 390	多功能抗氧化劑 液體產品，分散性佳	所有塑膠 彈性體 纖維		190 公斤 鐵桶
291	 32687-77-7	白色粉末 熔點 >145°C	反應型高效能抗氧化劑 具優異的抗 NOx 特性	所有塑膠 彈性體		20 公斤 紙袋裝
SP	 61788-44-1	透明液體 黏度 3000~8000cps 分子量 300~330	多功能抗氧化劑液體產品， 分散性佳	所有塑膠 彈性體		200 公斤 鐵桶

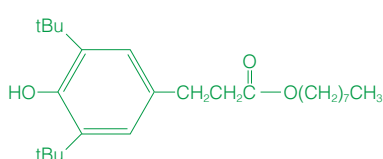
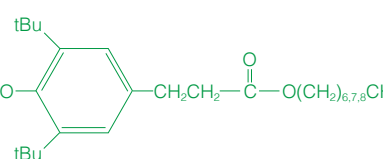
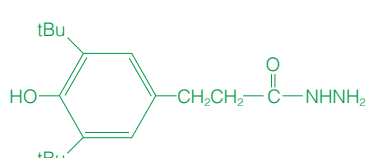
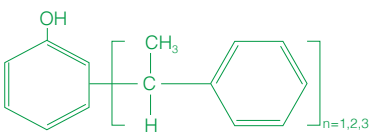
F.P.A.：適合在食品包裝用途。 \*：符合 JHOSPA 及 FDA 之要求

## 2. 混合型抗氧化劑 (A Blend Antioxidants)

ADK STAB	化學結構	性質	特性	應用	F.P.A.	包裝
A-611 A-611RG	AO-60/2112=1:1	白色粉末 白色顆粒	2112 與不同比例 AO-60 混合 高效能多用途抗氧化劑	聚烯烴 所有塑膠	*	20 公斤 紙袋
A-612 A-612RG	AO-60/2112=1:2	白色粉末 白色顆粒				
A-614 A-614RG	AO-60/2112=1:4	白色粉末 白色顆粒				
A-511	AO-50/2112=1:1	白色粉末	2112 與不同比例 AO-50 混合 高效能多用途抗氧化劑	聚烯烴 所有塑膠 橡膠	*	20 公斤 紙袋
A-512	AO-50/2112=1:2	白色粉末				
A-514	AO-50/2112=1:4	白色粉末				

F.P.A.：適合在食品包裝用途。 \*：符合 JHOSPA 及 FDA 之要求



CCP STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
390	 144429-84-5	Clear Liquid Vis.375cps M.W.390	Versatile Liquid type and easy to operate	All Elastomers and PU		190KG Iron Drum
390E	 125643-61-0	Clear Liquid Vis.375cps M.W.390	Versatile Liquid type and easy to operate	All Elastomers and PU		190KG Iron Drum
291	 32687-77-7	White Powder M.P.>145°C	High Efficiency Reactive Type Resistant to NOx	All Elastomers and PU		20KG Bag
SP	 61788-44-1	Clear Liquid Vis.3000~8000cps M.W.300~330	Versatile Liquid type and easy to operate	All Elastomers and PU		200KG Iron Drum

F.P.A. : Food Packing Application \* : JHOSPA registered & Listed in FDA' CFR

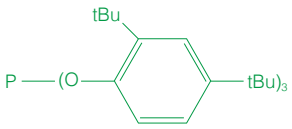
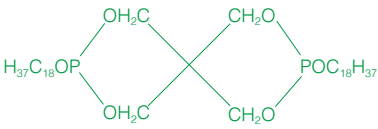
## 2. A Blend Antioxidants

ADK STAB	Chemical Structure	Properties	Features	Application	F.P.A.	Packing
A-611 A-611RG	AO-60/2112=1:1	White Powder White Granule	Mixed of AO-60, 2112 Versatile and highly effective antioxidant	All Plastics & Polyolefins	*	20KG Bag
A-612 A-612RG	AO-60/2112=1:2	White Powder White Granule				
A-614 A-614RG	AO-60/2112=1:4	White Powder White Granule				
A-511	AO-50/2112=1:1	White Powder	Mixed of AO-50, 2112 Versatile and highly effective antioxidant	All Plastics & Polyolefins	*	20KG Bag
A-512	AO-50/2112=1:2	White Powder				
A-514	AO-50/2112=1:4	White Powder				

F.P.A. : Food Packing Application \* : JHOSPA registered & Listed in FDA' CFR

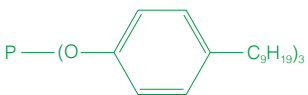
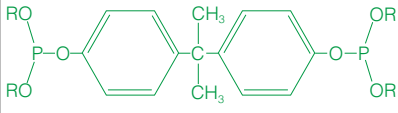
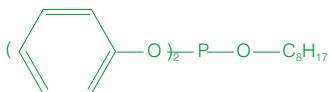
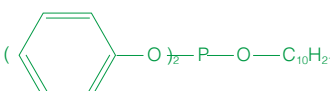
### 3. 亞磷酸酯系抗氧化劑 (Phosphite Antioxidant)

#### (1) 固體亞磷酸酯 (Solid Phosphites)

ADK STAB	化學結構 CAS No.	性質	特性	應用	F.P.A.	包裝
2112 2112RG	 31570-04-4	白色粉末 白色顆粒 熔點 183°C 分子量 647	具優異水解安定性、 優異加工安定性	聚烯烴、ABS、 PS、工程塑膠 和一般塑膠	*	20 公斤 紙袋
PEP-8T	 3860-34-6	白色片狀 軟化點 52°C	具優異顏色改良效果 及加工安定性	聚烯烴、ABS、 PS 和一般塑膠	*	20 公斤 紙箱

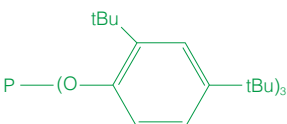
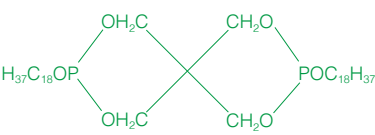
F.P.A.：適合在食品包裝用途。 \*：符合 JHOSPA 及 FDA 之要求

#### (2) 液體亞磷酸酯 (Liquid Phosphites)

ADK STAB	化學結構 CAS No.	性質	特性	應用	F.P.A.	包裝
1178	 26523-78-4	透明液體 黏度 5000cps 分子量 689	一般簡稱 TNPP	聚烯烴、ABS、 PS、工程塑膠 和一般塑膠	*	200 公斤 鐵桶
1500	 R=C <sub>12</sub> ~C <sub>15</sub> ALKYL GROUP 96152-48-6	透明液體 黏度 1000cps 分子量約 1112	一般簡稱 439 優良的熱安定性與顏 色安定性	ABS 和 PVC	*	190 公斤 鐵桶
C	 15647-08-2	透明液體 黏度 10cps 分子量 346	一般簡稱 DPOP 優良的熱安定性與顏 色安定性	ABS、PVC 工程塑膠		200 公斤 鐵桶
135A	 26544-23-0	透明液體 黏度 15cps 分子量 375	一般簡稱 DPDP 優良的熱安定性與顏 色安定性	ABS、PVC 工程塑膠		200 公斤 鐵桶

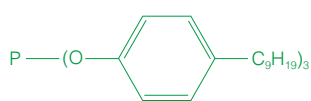
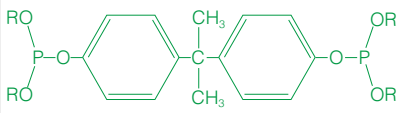
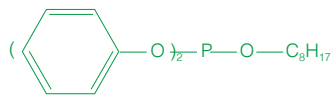
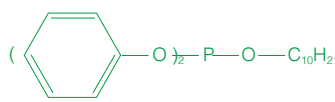
### 3. Phosphite Antioxidant

#### (1) Solid Phosphites

ADK STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
2112 2112RG	 31570-04-4	White Powder White Granule M.P.183°C M.W.647	Excellent Hydrolytic Stability Excellent Process Stability	Polyolefines, ABS, PS & Engineering Plastics	*	20KG Bag
PEP-8T	 3860-34-6	White Flake Softening Point:52°C M.W.733	Excellent Color Improvement High Process Stability	Polyolefines, ABS, PS & Others	*	20KG Carton

F.P.A. : Food Packing Application \* : JHOSPA registered & Listed in FDA' CFR

#### (2) Liquid Phosphites

ADK STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
1178	 26523-78-4	Clear Liquid Vis.5000cps M.W.689	Called TNPP	Polyolefines, ABS, PS, and Engineering Plastics	*	200KG Iron Drum
1500	 R=C12~C15 ALKYL GROUP 96152-48-6	Clear Liquid Vis.1000cps M.W.ab1112	Called 439 Excellent Thermal and Color Stability	ABS, PVC	*	190KG Iron Drum
C	 15647-08-2	Clear Liquid Vis.10cps M.W.346	Called DPOP Color Improvement High Heat Stability	ABS, PVC, Engineering Plastics		200KG Iron Drum
135A	 26544-23-0	Clear Liquid Vis.15cps M.W.375	Called DPDP Color Improvement High Heat Stability	ABS, PVC, Engineering Plastics		200KG Iron Drum



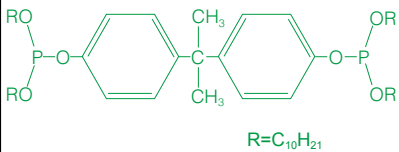
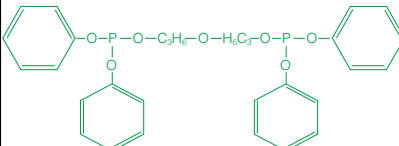
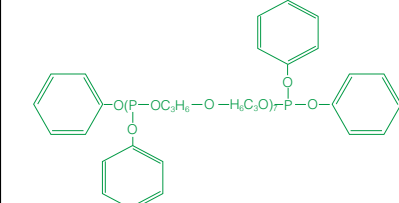
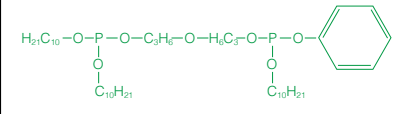
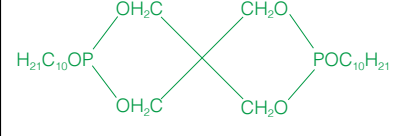
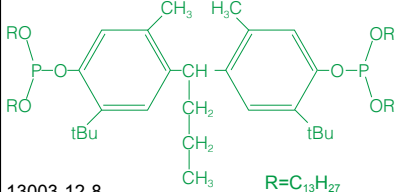
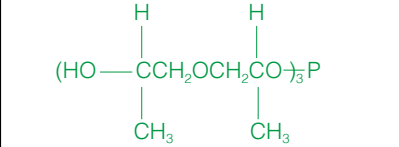
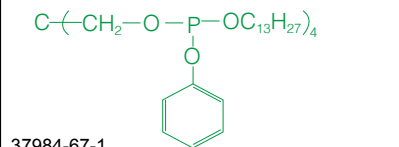
ADK STAB	化學結構 CAS No.	性質	特性	應用	F.P.A.	包裝
517	 25550-98-5	透明液體 黏度 16cps 分子量 438	一般簡稱 PDDP 優良的熱安定性與顏色安定性	ABS、PVC 工程塑膠		190 公斤 鐵桶
3010	 25448-25-3	透明液體 黏度 20cps 分子量 502	一般簡稱 TDP 優良的熱安定性與顏色安定性	ABS、PVC 工程塑膠		170 公斤 鐵桶
2013	 67874-37-9	透明液體 黏度 29 cps 分子量 586	優良的熱安定性與顏色安定性	ABS、PVC、 工程塑膠		190 公斤 鐵桶
TPP	 101-02-0	透明液體 黏度 18cps 分子量 310	優良的熱安定性與顏色安定性	PU、PVC 和橡膠		200 公斤 鐵桶 PE 桶

CCP STAB	化學結構 CAS No.	性質	特性	應用	F.P.A.	包裝
317	 3164-60-1	透明液體 黏度 10cps 分子量 382	一般簡稱 PDOP 優良的熱安定性與顏色安定性	ABS、PVC、 工程塑膠		190 公斤 鐵桶
3012 3012L	 3076-63-9	透明液體 黏度 20cps 分子量 586	一般簡稱 TLP 優良的熱安定性與顏色安定性 3012L 為低酚規格 (Phenol content : 500ppm max)	ABS、PVC、 PU、工程塑膠		170 公斤 鐵桶
628 628L	 77745-66-5	透明液體 黏度 39cps 分子量 628	一般簡稱 TTDP 優良的熱安定性與顏色安定性 628L 為低酚規格 (Phenol content : 500ppm max)	ABS、PVC、 PU、工程塑膠		170 公斤 鐵桶



ADK STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
517	 25550-98-5	Clear Liquid Vis.16cps M.W.438	Called PDDP Color Improvement High Heat Stability	ABS, PVC, Engineering Plastics		190KG Iron Drum
3010	 25448-25-3 R=C <sub>10</sub> H <sub>21</sub>	Clear Liquid Vis.20cps M.W.502	Called TDP Color Improvement High Heat Stability	ABS, PVC Engineering plastics		170KG Iron Drum
2013	 67874-37-9	ClearLiquid Vis.29cps M.W.586	Color Improvement High Heat Stability	ABS, PVC Engineering plastics		190KG Iron Drum
TPP	 101-02-0	ClearLiquid Vis.18cps M.W.310	Color Improvement High Heat Stability	PU, PVC and Rubbers		200KG Iron/ PE Drum

CCP STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
317	 3164-60-1	ClearLiquid Vis.10cps. M.W.382	Called PDOP Color Improvement High Heat Stability	ABS, PVC, Engineering Plastics		190KG Iron Drum
3012 3012L	 3076-63-9 R=C <sub>12</sub> H <sub>25</sub>	Clear Liquid Vis.20cps M.W.586	Called TLP Color Improvement High Heat Stability 3012L: Low Phenol content ( 500 ppm max.)	PU, PVC Engineering Plastics		170KG Iron Drum
628 628L	 77745-66-5 R=C <sub>13</sub> H <sub>27</sub>	Clear Liquid Vis.39cps M.W.628	Called TTDP Color Improvement High Heat Stability 628L: Low Phenol content (500 ppm max.)	PU, PVC Engineering Plastics		170KG Iron Drum

CCP STAB	化學結構 CAS No.	性質	特性	應用	F.P.A.	包裝
100	 61670-79-9	透明液體 黏度 300cps 分子量 916	一般簡稱 675 優良的熱安定性與顏色 安定性	ABS、PVC、 PU、工程塑膠		190 公斤 鐵桶
TDD	 80584-85-6	透明液體 黏度 80cps 分子量 566	一般簡稱 THOP 優良的熱安定性與顏色 安定性	ABS、PVC、 PU、工程塑膠		200 公斤 鐵桶
PDP	 80584-86-7	透明液體 黏度 490cps 分子量 2102	一般簡稱 DHOP 優良的熱安定性與顏色 安定性	ABS、PVC、 PU、工程塑膠		200 公斤 鐵桶
IPDP	 115035-49-9	透明液體 黏度 31 cps 分子量 758	一般簡稱 BX877-3 優良的熱安定性與顏色 安定性	ABS、PVC、 PU、工程塑膠		190 公斤 鐵桶
508	 26544-27-4	白色混濁液體 分子量 508	一般簡稱 600 優良的熱安定性與顏色 安定性	ABS、PVC、 PU、工程塑膠		200 公斤 鐵桶
AS-4500	 13003-12-8	透明液體 黏度 1100cps 分子量 1240	優良的熱安定性與顏色 安定性	聚烯經、ABS、 PVC、PS、工 程塑膠和一般塑 膠		170 公斤 鐵桶
TDPP	 36788-39-3	透明液體 分子量 430	一般簡稱 430 優良的熱安定性與顏 色安定性	PVC、PU、 工程塑膠		200 公斤 鐵桶
TPD	 37984-67-1	白色混濁液體 黏度 48cps 分子量 1424	優良的熱安定性與顏 色安定性	ABS、PVC PU、工程塑膠		200 公斤 鐵桶

F.P.A.：適合在食品包裝用途。

\*：符合 JHOSPA 及 FDA 之要求



CCP STAB	Chemical Structure CAS No.	Properties	Features	Application	F.P.A.	Packing
100	 61670-79-9 R=C <sub>10</sub> H <sub>21</sub>	Clear Liquid Vis.300cps M.W.916	Called 675 Color Improvement High Heat Stability	PU, PVC Engineering Plastics		190KG Iron Drum
TDD	 80584-85-6	Clear Liquid Vis.80 M.W.566	Called THOP Color Improvement High Heat Stability	PU, PVC Engineering Plastics		200KG Iron Drum
PDP	 80584-86-7	Clear Liquid Vis.490 M.W.2102	Called DHOP Color Improvement High Heat Stability	PU, PVC Engineering Plastics		200KG Iron Drum
IPDP	 115035-49-9	Clear Liquid Vis.31cps M.W.758	Called BX877-3 Color Improvement High Heat Stability	PU, PVC Engineering Plastics		190KG Iron Drum
508	 26544-27-4	Haze Liquid M.W.508	Called 600 Color Improvement High Heat Stability	PU, PVC Engineering Plastics		200KG Iron Drum
AS-4500	 13003-12-8 R=C <sub>13</sub> H <sub>27</sub>	Clear Liquid Vis.1400cps M.W.1240	Color Improvement High Heat Stability	Polyolefins, ABS, PVC, PS, and Engineering Plastics		170KG Iron Drum
TDPP	 36788-39-3	Clear Liquid M.W. 430	Called 430 High Heat Stability	PU, PVC Engineering Plastics		200KG Iron Drum
TPD	 37984-67-1	Haze Liquid Vis.48cps M.W.1424	Color Improvement High Heat Stability	PU, PVC Engineering Plastics		200KG Iron Drum

F.P.A. : Food Packing Application

\* : JHOSPA registered & Listed in FDA' CFR

## (二) 聚酯可塑劑 (Polyester plasticizers)

為 PVC 塑膠用可塑劑的一種，因具有較佳的耐油性及對 PS 與 ABS 塑膠有優良的非移行性，因此常被應用於非移行電線、膠布、墊片 (Gasket)、膠帶，或需耐油性之水管或手套。此外尚可應用於橡膠方面，橡膠產品使用聚酯可塑劑後，其耐油性、耐寒性與耐熱性都比其他可塑劑更為優良。

ADK CIZER	組成	性質	特性	應用	包裝
PN-1030	己二酸聚酯	分子量：約 1,700 色度：約 60 Max 黏度：約 3,000cps	具低揮發性、優異熱老化安定性、對 PS、ABS 有優異的耐移行性和耐萃取性以及絕緣性	耐移行之電線、膠布、薄膜、皮革等	200KG 鐵桶
PN-850	己二酸聚酯	分子量：約 2,000 色度：約 60 Max 黏度：約 3,000cps	具低揮發性、優異熱老化安定性、對 PS 有優異的耐移行性和耐萃取性以及絕緣性	絕緣膠布、耐油製品	200KG 鐵桶
PN-860	己二酸聚酯	分子量：約 2,000 色度：約 60 Max 黏度：約 3,000cps	具低揮發性、優異熱老化安定性、對 PS 有優異的耐移行性和耐萃取性以及絕緣性	絕緣膠布、耐油製品	200KG 鐵桶
PN-150T	己二酸聚酯	分子量：約 1,000 色度：約 60 Max 黏度：約 500cps	低黏度易加工、優異低溫性質、適用於橡膠類產品	透明 PVC 膠布、手套、NBR、ECO、ACM、CDE、CSM 等橡膠類	200KG 鐵桶
PN-310T	己二酸聚酯	分子量：約 2,500 色度：約 60 Max 黏度：約 5,300cps	優異之耐油性、耐移行性、耐萃取性以及絕緣性	電纜、電線、耐油製品、抗油靴	200KG 鐵桶
PN-650T	己二酸聚酯	分子量：約 1,800 色度：約 60 Max 黏度：約 3,000cps	優異之耐油性、耐移行性、耐萃取性以及與 PVC 良好的親和力	絕緣膠布、耐油製品	200KG 鐵桶
RS-107	己二酸酞酯	分子量：約 434 色度：約 60 Max 黏度：約 20cps	具低揮發性、優異相容性、耐低溫性、長時間熱安定性通過 FDA 安全標準	NBR、CR、ECO、ACM、SBR、PU、POLYSULFIDE、CSM 等重要汽車安全零件抗油管	200KG 鐵桶

## (II) Polyester plasticizers

Because Polyester Plasticizers for PVC have better property in oil resistance and excellent non- migration for PS and ABS plastics, they are applicable in non-migration wire, film, gasket, oil resistance hoses, gloves or shoes, and insulation tape. In addition, they can also apply in rubbers. The rubber products after using Polyester Plasticizers, the properties of oil and low temperature and heat resistance can be improved and better than adding other conventional plasticizers.

ADK CIZER	Composition	Pro perties	Characteristics	Application	Packing
PN-1030	Adipic acid polyester	M.W. ab. 1,700 APHA below 60 Vis. ab. 3,000cps	<ul style="list-style-type: none"> <li>• Low volatility</li> <li>• Excellent chemical extraction</li> <li>• Non-migration property (PS/ABS)</li> <li>• Excellent electric insulating property</li> </ul>	<ul style="list-style-type: none"> <li>• Migration-proof sheet, leather and electronic wire</li> </ul>	200KG Iron Drum
PN-850	Adipic acid polyester	M.W. ab. 2,000 APHA below 60 Vis. ab. 3,000cps	<ul style="list-style-type: none"> <li>• Low volatility</li> <li>• Excellent oil resistance</li> <li>• Non-migration property(PS)</li> <li>• Excellent electric insulating property</li> </ul>	<ul style="list-style-type: none"> <li>• Electric tape</li> <li>• Oil resistance products</li> </ul>	200KG Iron Drum
PN-860	Adipic acid polyester	M.W. ab. 2,000 APHA below 60 Vis. ab. 3,000cps	<ul style="list-style-type: none"> <li>• Low volatility</li> <li>• Excellent oil resistance</li> <li>• Non-migration property(PS)</li> <li>• Excellent electric insulating property</li> </ul>	<ul style="list-style-type: none"> <li>• Electric tape</li> <li>• Oil resistance products</li> </ul>	200KG Iron Drum
PN-150T	Adipic acid polyester	M.W. ab. 1,000 APHA below 60 Vis. ab. 500cps	<ul style="list-style-type: none"> <li>• Low viscosity easy handing</li> <li>• Good low temperature property for PVC, Rubber application</li> </ul>	<ul style="list-style-type: none"> <li>• Transparent PVC Sheet, glove</li> <li>• NBR, ECO, ACM, CDE, CSM rubber</li> </ul>	200KG Iron Drum
PN-310T	Adipic acid polyester	M.W. ab. 2,500 APHA below 60 Vis. ab. 5,300cps	<ul style="list-style-type: none"> <li>• Excellent resistance to oil and chemical extraction</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic wire and cable.</li> <li>• Oil resistance products</li> </ul>	200KG Iron Drum
PN-650T	Adipic acid polyester	M.W. ab. 1,800 APHA below 60 Vis. ab. 3,000cps	<ul style="list-style-type: none"> <li>• Excellent resistance to oil and chemical extraction</li> <li>• Good affinity to PVC</li> </ul>	<ul style="list-style-type: none"> <li>• Electric tape</li> <li>• Oil resistance products</li> </ul>	200KG Iron Drum
RS-107	Glycol ether	M.W. ab. 434 APHA below 60 Vis. ab. 20cps	<ul style="list-style-type: none"> <li>• Excellent low temperature property</li> <li>• Low volatility</li> <li>• Excellent heat-stability</li> <li>• Approved by FDA</li> </ul>	<ul style="list-style-type: none"> <li>• NBR, CR, ECO, ACM, Polysulfide, CSM, SBR, PU, etc.</li> <li>• Hose resisting to oil and gasoline</li> </ul>	200KG Iron Drum

CCP CIZER	組成	性質	特性	應用	包裝
D-1050	己二酸聚酯	分子量：約 2,000 色 度：約 60 Max 黏 度：約 3,000cps	優異熱老化安定性、對 PS、ABS 有優異的耐移行性和耐萃取性以及絕緣性	UL-105 耐移行電線、電纜、絕緣膠布	200KG 鐵桶
D-1050M	己二酸聚酯	分子量：約 1,800 色 度：約 60 Max 黏 度：約 2200 cps	優異熱老化安定性、對 PS、ABS 有優異的耐移行性和耐萃取性以及絕緣性，低黏度	UL-105 耐移行電線、電纜、絕緣膠布	200KG 鐵桶
D-1070	己二酸聚酯	分子量：約 1,900 色 度：約 60 Max 黏 度：約 2,700 cps	膠化速度快、可塑化效率高、對 PS、ABS、PC 有優異的耐移行性	UL-105 耐移行電線、電纜、絕緣膠布	200KG 鐵桶
D-1200	己二酸聚酯	分子量：約 2,200 色 度：約 60 Max 黏 度：約 3,800	可塑化效率高、耐油萃取性、耐溶劑特性、膠化速度快、與 PVC 之相容性佳	家庭電氣產品、耐油汽車電線、家庭手套之生產	200KG 鐵桶
D-190	己二酸聚酯	分子量：約 800 色 度：約 60 Max 黏 度：約 250cps	優異的耐低溫性質、低揮發及低黏度易加工	兼具耐溫及耐寒要求之電線、透明膠布	200KG 鐵桶
D-320	己二酸聚酯	分子量：約 1,300 色 度：約 60 Max 黏 度：約 1,200cps	優異的耐油性質、低揮發及低黏度易加工	兼具耐溫及耐油要求之電線、透明膠布	200KG 鐵桶
D-630	己二酸酞酯	分子量：約 520 色 度：約 125 Max 黏 度：約 30cps	具耐寒性、耐老化性，與 PVAc、PVB 有良好的耐遷移性與相容性	NBR、SBR、PU、Polysulfide、PVC、EVA、PVAc、PVB	200KG 鐵桶
D-810	對苯二甲酸異辛酯	色 度：約 20 Max 黏 度：約 60 cps	低揮發性，以及電氣性能優異、兼具良好可塑化效率與耐熱機械性質	兒童玩具、吹氣游泳池、室外防水布、絕緣電線	200KG 鐵桶
D-820	安息香酸酯	分子量：約 410 色 度：約 60 Max 黏 度：約 30cps	與 PVC 有良好的親和力黏度低易加工	透明膠布、PVC 手套	200KG 鐵桶
D-822	安息香酸酯	分子量：約 340 色 度：約 60 Max 黏 度：約 40 cps	與 PVC 有良好的親和力黏度低易加工	透明膠布、PVC 手套	200KG 鐵桶
D-825	安息香酸酯	分子量：約 310 色 度：約 100 Max 黏 度：約 80 cps	與 PVAc、EVA 乳膠相溶性佳	PVAc、EVA 乳膠接著劑、塗料塑化劑	200KG 鐵桶



CCP CIZER	Composition	Properties	Characteristics	Application	Packing
D-1050	Adipic acid polyester	M.W. ab. 2,000 APHA below 60 Vis. ab. 3,000	<ul style="list-style-type: none"> <li>• Low volatility</li> <li>• Excellent chemical extraction</li> <li>• Non-migration property (PS/ABS)</li> <li>• Excellent electric insulating property</li> </ul>	<ul style="list-style-type: none"> <li>• UL-105 Migration-proof electric wires and cables,</li> <li>• Friction tapes</li> </ul>	200KG Iron Drum
D-1050M	Adipic acid polyester	M.W. ab. 1,800 APHA below 60 Vis. ab. 2,200cps	<ul style="list-style-type: none"> <li>• Low viscosity</li> <li>• Excellent chemical extraction</li> <li>• Non-migration property (PS/ABS)</li> <li>• Excellent electric insulating property</li> </ul>	<ul style="list-style-type: none"> <li>• UL-105 Migration-proof electric wires and cables,</li> <li>• Friction tapes</li> </ul>	200KG Iron Drum
D-1070	Adipic acid polyester	M.W. ab. 1,900 APHA below 60 Vis. ab. 2,700cps	<ul style="list-style-type: none"> <li>• Non-migration property (PS/ABS/PC)</li> <li>• Excellent chemical extraction</li> <li>• Good compatibility</li> </ul>	<ul style="list-style-type: none"> <li>• UL-105 Migration-proof electric wires and cables,</li> <li>• Friction tapes</li> </ul>	200KG Iron Drum
D-1200	Adipic acid polyester	M.W. ab. 2,000 APHA below 60 Vis. ab. 3,800cps	<ul style="list-style-type: none"> <li>• Excellent extract resistance to oils and solvents</li> <li>• High gelation efficiency</li> <li>• Good compatibility</li> </ul>	<ul style="list-style-type: none"> <li>• Electric wires</li> <li>• Gloves and footwear</li> </ul>	200KG Iron Drum
D-190	Adipic acid polyester	M.W. ab. 800 APHA below 60 Vis. ab. 250cps	<ul style="list-style-type: none"> <li>• Good high temperature resistance</li> <li>• Good lowtemperature properties</li> <li>• Low volatility</li> </ul>	<ul style="list-style-type: none"> <li>• Sheeting, leather children toys product</li> </ul>	200KG Iron Drum
D-320	Adipic acid polyester	M.W. ab. 1,300 APHA below 60 Vis. ab. 1,200cps	<ul style="list-style-type: none"> <li>• Low volatility</li> <li>• Good heat durability</li> <li>• Good resistance to extraction by oils</li> </ul>	<ul style="list-style-type: none"> <li>• Hose, tube, leather cloth</li> <li>• Refrigerator gasketing</li> <li>• Electrical wire</li> </ul>	200KG Iron Drum
D-630	Glycol ether	M.W. ab. 520 APHA below 125 Vis. ab. 30cps	<ul style="list-style-type: none"> <li>• Excellent low temperature and heat durability</li> <li>• Excellent compatibility and non-migration with PVAc · PVB</li> </ul>	<ul style="list-style-type: none"> <li>• For NBR, SBR, PU, Polysulfide, PVC, EVA, PVAc, PVB</li> </ul>	200KG Iron Drum
D-810	DOTP	APHA below 20 Vis. ab. 60cps	<ul style="list-style-type: none"> <li>• Excellent compatibility with PVC</li> <li>• Low volatility</li> <li>• Excellent electric performance.</li> <li>• Excellent low temperature flexibility</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture cover film</li> <li>• Blowing-air swimming pool,</li> <li>• Outdoor water-repellent cloth</li> </ul>	200KG Iron Drum
D-820	Benzoate	M.W. ab. 410 APHA below 60 Vis. ab. 30cps	<ul style="list-style-type: none"> <li>• Low viscosity and slight odor,</li> <li>• Good plate-out performance,</li> <li>• Quick gelation efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Sheet, electric wires, and gloves</li> <li>• Toy compounds</li> </ul>	200KG Iron Drum
D-822	Benzoate	M.W. ab. 340 APHA below 60 Vis. ab. 40cps	<ul style="list-style-type: none"> <li>• Low viscosity and slight odor</li> <li>• Good plate-out performance</li> <li>• Quick gelation efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Sheet, electric wires, and gloves</li> <li>• Toy compounds</li> </ul>	200KG Iron Drum
D-825	Benzoate	M.W. ab. 310 APHA below 100 Vis. ab. 80cps	<ul style="list-style-type: none"> <li>• High compatibility with PVAc and EVA emulsion</li> </ul>	<ul style="list-style-type: none"> <li>• PVAc, EVA</li> <li>• Emulsion adhesives</li> <li>• Paint</li> </ul>	200KG Iron Drum



### (三) 安定劑 (stabilizers)

可分為無毒 (Non-toxic) 的鈣 / 鋅 (Ca/Zn)、發泡用及其他液體安定劑。由於品質穩定、熱安定性及加工性優良，所以適用於無毒 PVC 產品或不含重金屬的 PVC 產品，使用的對象如玩具、手套、醫療用品、水管、保鮮膜、電線、條材、膠皮、膠布、壁紙等 PVC 產品。

#### 1. PVC 用安定劑

ADK STAB	組成	性質 / 特性	應用	包裝
SC-23	鈣 / 鋅 液狀	無毒安定劑，符合 FDA 及 JHPA 安全規定 (添加量小於 13.6% 時)	壓延成型無毒 PVC 板	190KG 鐵桶
SC-24	鈣 / 鋅 液狀	具優良安定性、透明性 無毒安定劑，符合 FDA 及 JHPA 安全規定 (添加量小於 13.6% 時)	吹袋及壓出成型之 PVC 保鮮膜	190KG 鐵桶
SC-308E	鈣 / 鋅 液狀	無毒安定劑，符合 JHPA 安全規定	吹袋及壓出成型之 PVC 保鮮膜	190KG PE 桶
37W	鈣 / 鋅 糊狀	具優良安定性、透明性 無毒安定劑，符合 FDA 及 JHPA 安全規定 (添加量小於 10% 時)	<ul style="list-style-type: none"> <li>壓延成型無毒 PVC 板及膜</li> <li>壓出成型之軟質無毒 PVC 管</li> <li>射出成型無毒軟質 PVC 產品</li> </ul>	160KG 鐵桶

#### 2. 其他安定劑

ADK STAB	組成	性質 / 特性	應用	包裝
BAP-1T	液體 壓克力	氣泡調節劑	壓延、糊狀成型之 PVC 發泡膠皮、壁紙和地磚	190KG 鐵桶
FL-23	鈉 / 鋅 液狀	具促進發泡及安定劑之效果發泡速度快	糊狀成型 PVC 發泡膠皮和壁紙	200KG PE 桶
CPL-23TW	鋅系 液狀	有機複合發泡安定劑，亦可當發泡觸媒，加速產品反應速度和均勻性	乳化 PVC 生產之發泡壁紙、膠皮及漆包線	190KG PE 桶
NALP	鈉系 液狀	有機金屬，加速塗料產品反應速度	PU-Block type 等塗料	180KG PE 桶
DPP	亞磷酸酯系 液狀	PVC 用螯合物	PVC 安定劑中間體	220KG PE 桶



### (III) Stabilizers

Our stabilizers for PVC are the liquid stabilizers which can be divided into non-toxic Ca/Zn, foaming and others series. Because they are stable in quality, excellent in heat stability and working process, they are used in toys, gloves, medical bags and tubes, hoses, wrap film, electric wire, sheet, leather, PVC wall paper and so on.

#### 1. Stabilizers for PVC

ADK STAB	Composition	Characteristics	Application	Packing
SC-23	Ca/Zn Liquid	Approved by FDA and JHPA (Bellow 13.6%)	Non toxic calendered PVC sheet	190 KG Iron Drum
SC-24	Ca/Zn Liquid	Approved by FDA and JHPA (Bellow 13.6%)	General purpose formulation	190 KG Iron Drum
SC-308E	Ca/Zn Liquid	Approved by JHPA	Expanded wall paper and sheet of PVC emulsion	190KG PE Drum
37W	Ca/Zn Paste	Approved by FDA and JHPA (Bellow 10.0%)	Plasticized sheet, hose and medical tubing blending with non toxic chelator	160 KG Iron Drum

#### 2. Other stabilizers

ADK STAB	Composition	Characteristics	Application	Packing
BAP-1T	Acrylate Liquid	Special cell adjuster for fine cell Provides excellent cell stability blending 0.3-1.0 phr together with foam	Expanded, calendered PVC wall paper and sheet	190KG Iron Drum
FL-23	Na/Zn Liquid	Suitable for low temperature expansion and high coefficient expansion for remarkable high expansion rate	Expanded wall paper and sheet of PVC emulsion	200KG PE Drum
CPL-23TW	Zn Liquid	One of organic complex foaming stabilizer Also serve as foaming catalyst	Expanded wall paper and leathercloth in emulsion PVC Insulating vanish for electric wire	190KG PE Drum
NALP	Na Liquid	Organometallic, serve as rxn catalyst for coating	PU-Blocked Enamel for wire coating	180KG PE Drum
DPP	Phosphite Liquid	Chelate for PVC	Intermediate for PVC stabilizer	220KG PE Drum

#### (四) 環氧大豆油 (Epoxidized Soybean Oil)

環氧大豆油為 PVC 塑膠之輔助安定劑兼可塑劑，使用 PVC 安定劑後再併用環氧大豆油，無論在熱安定性、加工性、透明性或耐候性方面都有相乘性的提升效果，添加環氧大豆油後，其他可塑劑添加量亦可減少。由於具有上述優點，所以成為 PVC 加工業不可缺少的重要原料。

CCP CIZER	組成	性質	特性	應用	包裝
B-22 *B-22D	環氧大豆油	分子量：約 1,000 色度：約 160 比重：約 0.993 黏度：約 350cps 閃點：293℃ 環氧價：6.6%	<ul style="list-style-type: none"> <li>具低揮發性</li> <li>優異耐熱性</li> <li>通過日本 JHPA 及 FDA 安全標準</li> </ul>	<ul style="list-style-type: none"> <li>包裝透明膜和膠布</li> <li>電線、管子和油漆</li> <li>當有機鹵化物之安定劑，如氯丁橡膠</li> </ul>	200KG 鐵桶/PE 桶 ISO-TANK

\* 脫臭級

#### (五) 磷系耐燃劑 (Phosphorus Flame Retardant)

ADK STAB	組成	性質	特性	應用	包裝
FP-600	雙酚磷系耐燃劑	色度：約 30 APHA 酸價：約 0.01 mg KOH/g 黏度：70℃約 100~250cps 水份：約 150ppm	高耐燃特性 高透明度 低揮發性 不含鹵素及重金屬	ABS、PC、PC/ ABS、& m-PPE	220KG 鐵桶 ISO-TANK
FP-700	雙酚磷系耐燃劑	色度：約 30 APHA 酸價：約 0.01 mg KOH/g 黏度：70℃約 100~250 cps 水份：約 150ppm	高耐燃特性 高透明度 低揮發性 不含鹵素及重金屬	ABS、PC、PC/ ABS、& m-PPE	220KG 鐵桶 ISO-TANK

CCP STAB	組成	性質	特性	應用	包裝
TPPS	磷酸三苯酯	色度：約 10 APHA 酸價：約 0.01 mg KOH/g 游離酚：約 150ppm 水份：約 250ppm 融點：48-50℃	高耐燃特性 白色片狀 不含鹵素及重金屬	PVC、PC/ABS Alloy 酚醛樹脂、環氧樹脂、 合成橡膠	25KG 袋裝
FR-35B	磷系耐燃劑	色度：約 70 APHA 酸價：約 0.01 mg KOH/g 比重：約 1.235 黏度：約 280 cps 水份：約 100ppm	高耐燃特性 高透明度 低揮發性 不含鹵素及重金屬	PVC 透明膠布、膠皮、 電線膠粒、PU/ 聚酯、 合成橡膠	220KG 鐵桶



## (IV) Epoxidized Soyabean Oil

ESBO has both functions of stabilized and plastized PVC. With the combination use of stabilizers and ESBO, the heat stability at processing, transparency, weather stability, etc. will be visibly improved. And after adding ESBO, the using quantity of conventional plastizers can be decreased relatively. With above advantages, it has become the essential raw material for PVC processing industries.

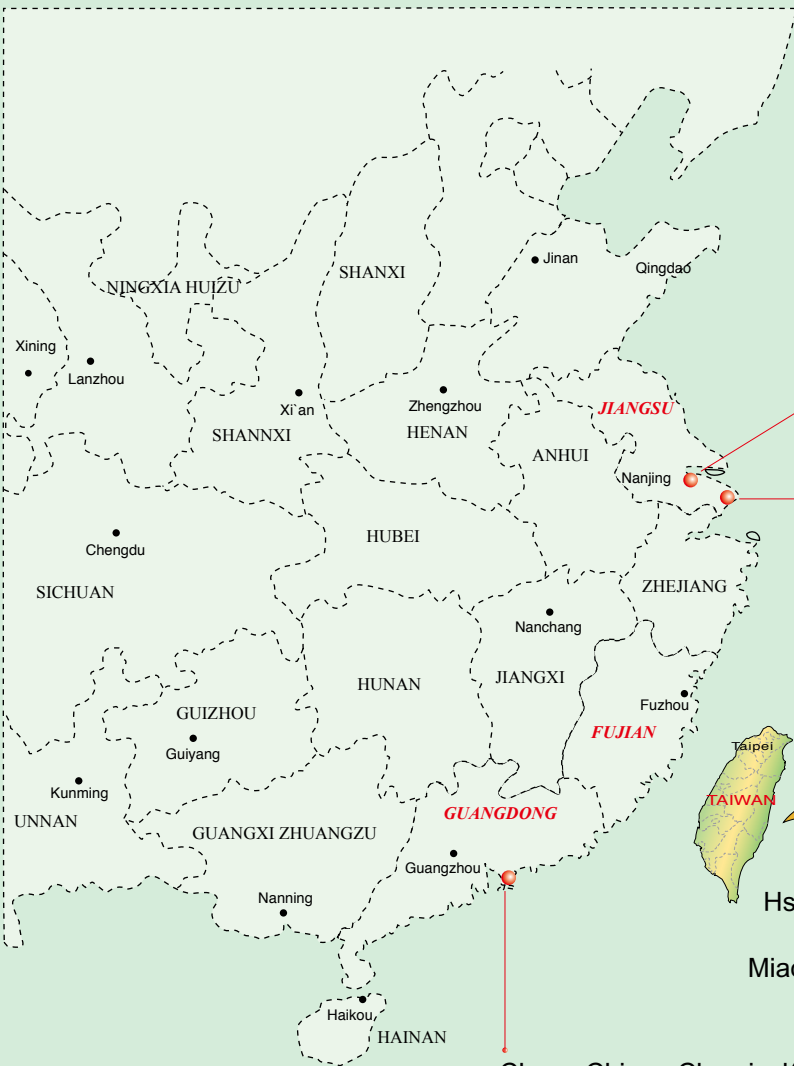
CCP CIZER	Composition	Properties	Characteristics	Application	Packing
B-22 *B-22D	Epoxidized soyabean oil	M.W.ab.1,000 APHA ab.160 Vis.ab. 350cps Flash point: 293°C Oxrane O <sub>2</sub> : 6.6%	<ul style="list-style-type: none"> <li>• Low volatility</li> <li>• Excellent heat resistance</li> <li>• Very little migration</li> <li>• Approved by FDA and JHPA</li> </ul>	<ul style="list-style-type: none"> <li>• Packing film and leather</li> <li>• Cable, Gasket, Hose, Tube, Paint</li> <li>• Stabilized for organic halogen such as neoprene</li> </ul>	200KG Iron Drum ISO-TANK

\* Low odor type

## (V) Phosphorus Flame Retardant

ADK STAB	Composition	Properties	Characteristics	Application	Packing
FP-600	Bisphenol A Di Phenyl Phosphate	APHA : ab. 30 A.V. : ab. 0.01 Vis.70°C 100~250cps Moisture : ab.150ppm	<ul style="list-style-type: none"> <li>• High performance of flame resistance</li> <li>• High transparency</li> <li>• Low volatility</li> <li>• No halides and heavy metals</li> </ul>	ABS · PC · PC/HIPS & m-PPE	220 KG Iron Drum ISO-TANK
FP-700	Bisphenol A Di Phenyl Phosphate	APHA : ab. 30 A.V. : ab. 0.01 Vis.70°C 100~ 250cps Moisture : ab. 150ppm	<ul style="list-style-type: none"> <li>• High performance of flame resistance</li> <li>• High transparency</li> <li>• Low volatility</li> <li>• No halides and heavy metals</li> </ul>	ABS · PC · PC/HIPS & m-PPE	220 KG Iron Drum ISO-TANK

CCP STAB	Composition	Properties	Characteristics	Application	Packing
TPPS	Triphenyl Phosphate	APHA : ab. 10 A.V. : ab. 0.01 Phenol : ab. 150ppm Moisture : ab. 250ppm M.P. : 48-50°C	<ul style="list-style-type: none"> <li>• High performance of flame resistance</li> <li>• White flake solid</li> <li>• No halides and heavy metals</li> </ul>	<ul style="list-style-type: none"> <li>• PVC</li> <li>• PC/ABS Alloy</li> <li>• Phenolic/Epoxy resin</li> <li>• Synthetic rubber</li> </ul>	25 KG Paper Bag
FR-35B	Phosphorus Flame Retardant	APHA : ab. 70 A.V. : ab. 0.01 S.G. : ab. 1.235 Vis. : ab. 280 Moisture : ab. 100ppm	<ul style="list-style-type: none"> <li>• High performance of flame resistance</li> <li>• White flake solid</li> <li>• No halides and heavy metals</li> </ul>	<ul style="list-style-type: none"> <li>• PVC transparent sheet</li> <li>• PVC electric wire</li> <li>• PU/Polyester</li> <li>• Synthetic rubber</li> </ul>	220 KG Iron Drum



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