



Certificate No : MY13/04479



Certificate No : MY11/03275



Plastic Technologies Enlighten Life

Colour Image Plastic Compound Sdn Bhd (Co.No. 527104-T)

Tel: +603-9548 0315, +603-9549 3524

www.cipcresin.com

TOUGHBLEND®

- Reinforced Compounds
结构增强改性塑料

Smoothblend®

- Wear Resistant Compounds
耐磨损改性塑料

MINERALBLEND®

- Mineral filled Compounds
矿物填充改性塑料

Spectroblend®

- Pre Coloured RoHS Complied Virgin
and Green Regenerative Compounds
精密着色 RoHS 认证新料和环保再生塑料

FRblend®

- Flame Retardant Compounds
阻燃级改性塑料

Electroblend®

- Conductive & Static Dissipative Compounds
导电和抗静电改性塑料

LOYBLEND®

- Thermoplastic Alloy Compounds
合金塑料

FLEXIBLEND®

- Rubber Modified Compounds
橡胶改性塑料

BioEcoBlend™

- Compostable Sustainable Compounds
可堆肥的可持续化合物

BioEcoBlend™

- Compostable Sustainable Packaging
可堆肥可持续包装

MasterBlend™

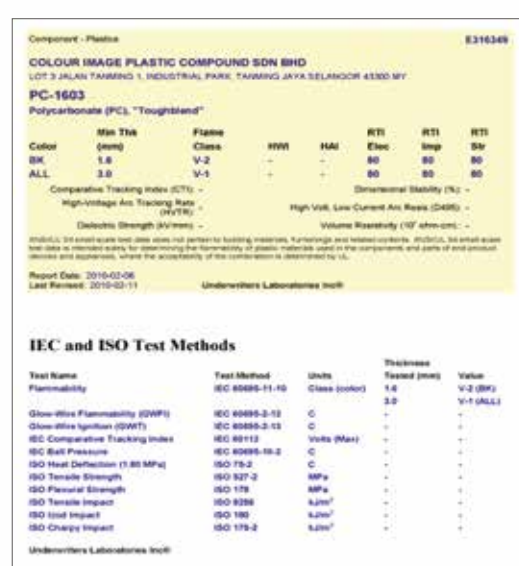
- Aesthetic & Performance Masterbatches
美学和性能色母粒



ISO 9001:2015 Quality System Certification

ISO 14001:2015 Environmental Management System

Sony Green Partner Certification



Corporate Vision

To be a leading engineering plastic compounder in the Asia Pacific Regions serving the electronics/electrical, automotive, industrial, pharmaceutical etc. markets.

Corporate Mission Statement

To excel in the engineering thermoplastic compounds markets by investing in

- Highly competent human capitals
- High accuracy R&D equipments
 - QA testing devices
- Advanced production machineries

Given the above investments, CIPC is able to offer high quality and environmental friendly engineering thermoplastics composites at competitive pricing with the shortest lead time.

Corporate Motto

Plastic technologies enlighten life

We are committed to endless new product developments in order to make life safer, more comfortable, energy and time saving etc for the benefits of mankind.

Processing Capabilities

High torque co-rotating intermeshing twin screw extruders with highly accurate gravimetric feeders makes us capable of manufacturing superb consistent quality engineering plastics compounds.

With the selection of the right raw materials at the right cost, we are confident to market our products at competitive pricing in the shortest possible lead time.

INTRODUCTION

Colour Image Plastic Compound (Malaysia) Sdn Bhd (CIPC) is a high tech company specialise in developing and selling high performance engineering plastic compound.

CIPC was formed in November 2000 as a wholly owned subsidiary company of Idealpoly Corporation Sdn Bhd. Initially CIPC has just started selling normal pre coloured ABS and HIPS unfilled material for one of the renowned Japanese air conditioning manufacturer. Due to our quality consistency and competitive pricing, CIPC has been appointed by Total Petrochemical South East Asia as a long term UL recognized toll compounder for some world class companies such as Hewlett Packard, Sony and Matsushita.

In March 2002, CIPC started to venture into developing manufacturing high end engineering plastic compound. Our manufacturing plant is situated in Balakong industrial park, Selangor with a total production capacity of approximately 28,000 metric ton per year. Our engineering plastic compound mainly supplying to electronic, automotive, electrical home appliances, construction, communication and sport equipment market.

Technical & Quality Control Capabilities

CIPC has committed to recruit a group of high caliber and experienced R&D technical personnel to perform endless new product developmental task to cater for dynamic upcoming markets and applications. CIPC is working closely with University Sains Malaysia (USM) and University Teknologi Mara (UiTM) to co-develop new formulations for different applications and to explore process know how improvements.

CIPC is currently using high tech German & Italian manufactured high torque twin screw extruders to manufacture consistent quality high performance engineering plastic compounds.

Quality assurance has been CIPC's continuous strategy and direction, we strongly believe that quality assurance is the basic of survival. In year 2001, we have been successfully accredited by Swiss based SGS for ISO 9001:2000. Sony Corporation Japan has awarded us "Sony Green Partner" as our effort to operate and maintain "Green Procurement". All these certification play an important role in ensuring customers' confidence. In year 2018, we have been awarded the ISO 14001 certificate for our environmental management system by SGS. Certification of ISO 14001:2015 proves that we are proactively working to minimise our impact on the environment.

With stringent EU RoHS rules and regulations, all based resins, additives, colorants, flame retardant used by CIPC are all RoHS compliance so as to ensure our products will not pose a threat to human health.

To ensure quality consistency, CIPC has brought in all lab equipments made from USA, Italy, Germany and Switzerland. For example, Universal Testing Machine (Instron), Electronic Display Izod Impact Tester (Ceast), HDT/Vicat Tester (Ceast), DSC, MFR Tester, Durometer, Microscope, SG balance, Surface Resistivity Checker, Colour Spectrometer (Minolta), Rockwell Hardness Tester (Wilson Wolpert)

简介

凯乐亿美工程塑料(马来西亚)有限公司(简称CIPC)是一家专门从事高性能改性塑料研发、生产和销售的高新技术企业。公司坐落于马来西亚雪兰莪州无拉港工业园内,具备年产两万八千吨改性塑料的生产能力。

2000年11月,CIPC在Idealpoly(马来西亚)有限公司的投资下成立,属Idealpoly(马来西亚)有限公司的全资公司。成立初期,公司为著名日本冷气生产商供应基本着色ABS和HIPS树脂。2001年,基于品质稳定和价格具有竞争力的特点,CIPC被 Total Petrochemical S.E.A 委任为惠普、索尼、松下等知名厂商长期提供高品质着色树脂,公司得到进一步发展。2002年3月,公司开始致力于改性工程塑料的研发和生产。目前,公司的改性工程塑料已广泛应用于电子、汽车、家电、建筑、通讯和体育用品等市场领域。

技术和质量保证实力

CIPC聘请一批卓越和经验丰富的技术研发人员不断进行新产品的开发,以满足新兴市场需求和应用。同时CIPC与马来西亚科学大学(USM)和马来西亚技术科技大学(UTM)进行密切合作,以致力于产品的应用研究和崭新的生产工艺探索。CIPC采用先进德国和意大利制造的高扭力双螺杆挤出机,以确保可以生产品质稳定的高性能工程塑料。

保证质量向来是CIPC的主导方向,深信良好的品质是CIPC生存的基石。2001年,CIPC通过了瑞士SGS公司ISO 9001:2000质量体系认证,2002年通过日本索尼公司颁发的环保采购认证。CIPC正在努力朝向国际ISO 14001:2004环保管理体系认证迈进。这些认证确保我们在品质保证方面达到国际化标准,并为客户提供了强力的保证。

基于欧盟的ROHS严格要求,CIPC采用的所有树脂、添加剂、着色剂、颜料、阻燃剂等都符合ROHS国际标准,以确保我们的产品不会影响人体健康。

为确保产品的质量,CIPC从美国、意大利、瑞士等引进先进的检测仪器,如:电子万能试验机(Instron)、电子显示冲击试验仪(Ceast)、流变测试仪、热变形/维卡温度测试仪(Ceast)、DSC分析仪、MFR测试仪、显微镜、体积/表面电阻测试仪、配色仪(Minolta)、洛氏硬度测试仪等。

CIPC产品条列

在这几年的时间,CIPC已建立了八大系列改性塑料,我们的系列包括以下国际注册品牌:

Toughblend® / 结构增强改性塑料

特点:强度高,刚性好,耐热,低收缩,综合强度高,韧性好,使用温度范围广,耐翘曲。

应用:车灯外壳,引擎护盖,电动工具外壳和零件,汽车把手,打印机内部零件,汽车电池托盘,电器骨架,换挡器壳,火车铁路分隔片,工业篮子把柄。

Smoothblend® / 耐磨损改性塑料

特点:低磨损系数,内润滑功能,省时省力。

应用:打印机内部零件,数码相机,DVD放映机内部零件,轴承,滑片,齿轮,滑动部件。

Mineralblend® / 矿物填充改性塑料

特点:耐高温,刚性好,低收缩,尺寸稳定,低成本。

应用:汽车内外饰件,保险杠,车灯壳,车牌框,空调压缩机外壳,摩托车车灯罩。

Spectroblend® / 精密着色塑料

特点:色泽稳定持久,色彩耐热,颜色种类多。

应用:打印机外壳,遥控器外壳,家电外壳,空调外壳,电脑显示器外壳等。

FRblend® / 阻燃级改性塑料

特点:阻燃,耐热,符合RoHS环保指令,UL黄卡认证,加工性佳。

应用:家电外壳,装饰灯壳,线缆套管,电插座,开关制背壳,交流接触器,连接器。

Electroblend® / 导电和抗静电改性塑料

特点:抗静电,导电,刚性好,加工性佳,密度较低,设计自由,低成本。

应用:IC晶片盘,IC夹,PCB板储存盘,抗静电工业容器。

Loyblend® / 合金塑料

特点:耐翘曲,刚性和耐热性佳,良好的韧性,加工性能佳。

应用:汽车部件,仪表盘,出风格,电视机外壳,相机外壳。

Flexblend® / 橡胶改性塑料

特点:高冲击韧性,高伸长率。

应用:汽车保险杠,汽车仪表盘,汽车内外饰品。



INTRODUCTION TO PLASTICS

Overview of Polymers

Polymers, the basic ingredients in plastics, can be defined as high molecular weight organic chemical compounds, synthetic or natural substances consisting of molecules. Practically all of these polymers are compounded with other products (additives, fillers, reinforcements, lubricants etc...) to provide many different properties and/or processing capabilities. Thus plastic is the correct technical term to use except in very few applications where only the polymer is used to fabricate products.

They undergo some primary processing such as distillation, cracking, or solvent extraction to produce ethylene, propylene, or benzene that are precursors to plastics. Chemical composition or the morphology of plastics is basically organic polymers that are very large molecules composed of connecting chains of carbon (C) items generally connected to hydrogen atom elements (H), chlorine (Cl), fluorine (F), and sulfur (S). Morphology is the study of the physical form or structure of a material (thermoplastics crystallinity or amorphous); the physical molecular structures of a polymer or in turn a plastic. As a result of these structures in production of plastics, processing the plastics into products, and product designs, great differences are found in mechanical and other properties.

A polymer is a large molecule built up by a repetition of small simple chemical units. These large molecules are formed by the reaction of a monomer. For example, the monomer for the plastic polyvinyl chloride (PVC) is vinyl chloride. When the vinyl chloride monomer is subjected to heat and pressure it undergoes a process called polymerization; the joining together of many small molecules in repeat units to make a very large molecules.

Selection of Plastic

Plastic selection ultimately depends upon the performance criteria of the product that usually includes aesthetics and cost effectiveness. Analyzing how a material is expected to perform with respect to requirements such as mechanical, electrical and chemical requirements combined with time and temperature can be essential to the selection process. The design engineer translates product requirements into material properties. Characteristics and properties of materials that correlate with known performances are referred to as engineering properties. They include such properties as tensile strength and modulus of elasticity, impact, hardness, chemical resistance, flammability, stress crack resistance, and temperature tolerance. Other important considerations encompass such factors as optical clarity, gloss, UV stability and weatherability.

In designing certain plastics parts, design engineers need to consider the following plastics properties before selecting a specific plastics.

Thermal properties

TPs properties and processes are influenced by their thermal characteristics such as melt temperature, glass-transition temperature, dimensional stability, thermal conductivity, specific heat, thermal diffusivity, heat capacity, coefficient of linear thermal expansion and decomposition (Td)

Melt temperature (Tm)

This refers to a plastic when it melts or softens and begins to have flow tendency. It provides recommendation for processing temperature to be used and related to tolerance and shrinkage behavior of molded products.

Glass Transition Temperature (Tg)

Tg, also called glass-rubber transition. This refers to the temperature at which a plastic undergoes a significant change in properties, transitioning from a glassy state to a rubbery state. Tg is the point below which thermoplastic behaves like glass but very strong and rigid. Above this temperature it is not as strong or rigid as glass, but neither is it brittle. For amorphous plastics, the temperature is usually about 10°C above the HDT and generally represents the upper limit for short term use. Semi-crystalline polymers lose some of their stiffness at this temperature, but can still have useful properties until reaching the material's melting point. Melting point typically represents the absolute upper temperature limit for semi-crystalline polymers.

Coefficient of Linear Thermal Expansion (CLTE)

CLTE is the ratio between the change of a linear dimension to the original dimension of the material per unit change in temperature (per ASTM methods). It is generally given as cm/cm/°C or in./in./°F. CLTE is an important consideration if dissimilar materials like one plastic to another or a plastic to metal and so forth are to be assembled where material expansion or contraction is restricted. With a mismatched CLTE, there could be destruction of plastics from factors such as cracking or buckling.

Mechanical Properties

Tensile strength

Tensile Strength is the maximum tensile stress sustained by a specimen during a tension test. When a maximum stress occurs at its yield point, it is designated as tensile strength at yield. When the maximum stress occurs at a break, it is its tensile strength at break.

Flexural Strength

Flexural strength determines the load necessary to generate a given level of strain on a specimen typically using a three point load.

Impact Resistance

It can be defined as the ability to resist breakage when struck by an object or dropped onto a hard surface. Izod impact is the most commonly used test to evaluate this property and it can be run both with and without a notch in a standard specimen.

Classifying Plastics

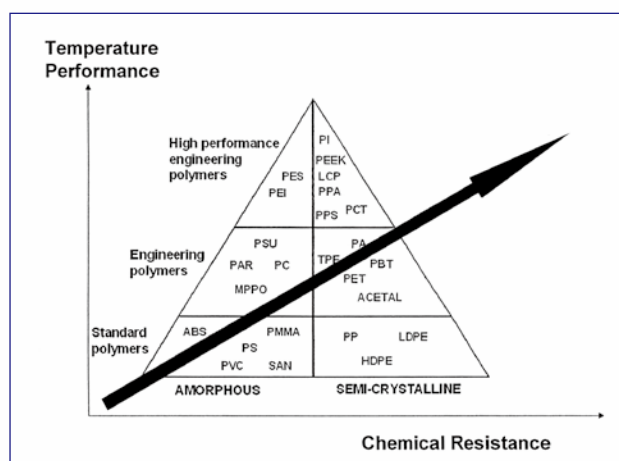
Plastics are a family of materials such as ceramics and metals. The family of plastics is classified in several ways. The two major classifications are thermoplastics and Thermosets. The TPs and TSs in turn are classified as commodity or engineering plastics (CP and EP). Commodity plastics are plastics such as PP, PE PVC and PS. Engineering Plastic are plastics such as polycarbonate (PC), Nylon, acetal etc... Most of the thermoplastics and thermoset plastics are of the engineering type.

Thermoplastic

There are crystalline and amorphous thermoplastics. During processing they soften and upon cooling harden into products that are capable of being repeatedly softened by reheating with their morphology (molecular structure) being crystalline or amorphous.

The crystalline plastics (basic polymers) tend to have their molecules arranged in a relatively regular repeating structure such as polyethylene (PE) and polypropylene (PP). This behavior identifies its morphology, that is the study of the physical form or structure of a material. They are usually translucent or opaque and generally have higher softening points than the amorphous plastics. They can be made transparent with chemical modification. Since commercially perfect crystalline polymers are not produced, they are identified technically as semi-crystalline thermoplastics. The crystalline TPs normally have up to 80% crystalline structure and the rest is amorphous.

The amorphous plastic is the term used that means formless describing a TP having no crystalline plastic structure. They form no pattern whereby their structure tends to form like spaghetti with their molecules going in all different directions. These TPs have no sharp melting point and are usually glassy and transparent such as PS and PMMA. This means that amorphous plastics soften gradually as they are heated.



Graphs showing different plastics with varying temperature and chemical resistant properties

Thermoplastic Types

TPs offer a wide range of matrix materials for reinforcement by fibers, flakes, beads, or particulate materials such as talc and mica. They bring the great advantage that they are more easily molded in mass production quantities (such as injection molding) than are reinforced thermosets. Reinforcement will improve the stiffness of the compound and increase its service temperature. Fiber and compounding technology permits high contents of long-length fiber used in injection molding, compression molding, stamping, pultrusion and tape layering or winding. Most types of thermoplastics can readily be compounded with reinforcing materials. Among the fibers, glass is the main reinforcement.

Acetals

Acetal or polyacetal (POM) also described as polyformaldehyde or polyoxymethylene, is an engineering thermoplastic often linked with polyamide (nylon), for its similar general appearance and properties and its use with polyamides in unreinforced plastics and reinforced plastics gear systems. These crystalline plastics have exceptional resistance to abrasion, heat, chemicals and solvents. With a low coefficient of surface friction, it is especially useful for mechanical products such as gears, pawls, latches, cams, cranks, plumbing parts, etc. It has high strength and stiffness, plus excellent creep and fatigue life, and (relatively) high service temperature. Different formulations are available to meet different requirements. Reinforced grades with glass and other fibers are also used, aimed at specialized products.

Nylons

Nylons are generally a very tough material, with excellent all-round chemical resistance. Heat resistance varies with the molecular count. It is most commonly reinforced with glass fiber, either short or long fiber lengths, in injection molding pellets, adding significantly to mechanical properties. Materials in the nylon family gave relatively high moisture absorption, meaning that they require drying before molding. Dimensional stability and tolerances can be affected by moisture pickup in the first few days of service.

Carbon fiber-reinforced nylons may be used for conductive and electrical shielding applications where high mechanical properties are also required, and for applications requiring a measure of internal lubrication, slip and good wear resistance. Mineral reinforced nylons (with talc or mica) offers very good dimensional stability, and low shrinkage and warpage. Using lower-cost intermediates, glass reinforced PA 6/6 can compete effectively with engineering resins such as PPS, PA46, PA 6, and the aromatic nylons.

Polyarylates

Polyarylates are aromatic polyesters (amorphous aromatic TP polyester) with a structure similar to that of polycarbonate (PC), which is also reflected in their physical properties. They are tough materials, with good processing characteristics, high heat distortion temperatures, and good resistance to weathering.

Polycarbonates

PCs is one of the strongest of thermoplastics, with good overall heat resistance, excellent electrical properties, tough, heat and flame resistant, dimensional stable, with stands boiling water, and environmentally-friendly. Moreover, they are transparent and resistant to a variety of chemicals (though not to organic solvents). They also have good dimensional stability, moisture pick-up is low and there is good resistance to creep. Outdoor exposure can cause some discoloration and embrittlement, but this is corrected by additives. Glass-reinforced PCs offer very high tensile strength and modulus, high impact strength, and other properties. Creep resistance, which is already excellent throughout a broad temperature range, can be further improved by a factor of two to three when PC is reinforced with glass fibers.

Polyester, TP

The popular thermoplastic polyesters are polybutylene terephthalate (PBT) and polyethylene terephthalate (PET). TP polyesters are in a family of polyesters that has widely varying and important range of properties. There are the two major groups of thermoplastics (with comparatively high melting points) and the thermosets (which are usually typified by a cross-linked structure). Thermoplastic polyesters are often called saturated polyesters to distinguish them from unsaturated polyesters that are the thermosets.

Overall the thermoplastic polyesters have properties similar to those of nylons, but offering lower moisture absorption and therefore better dimensional stability. The key practical difference between them is in speed of crystallization during processing (which establishes the optimum mechanical properties). PBT shows high speed of crystallization and can give fast molding cycles even at low mold temperatures (65-85C). PET does not reach its optimum properties until the level of crystallinity is raised by special processing and /or the molecules are oriented. For molding to technical component standards, it must be modified to achieve the rate of crystallization at the low temperature needed for fast cycles.

Commercially the PBTs are used widely in electrical/electronics applications, for housing, covers and base plates

Advanced Processing and QC Capabilities

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Colour Image Plastic Compound Sdn Bhd (Co.No. 527104-T)



Our Target Markets







Toughblend® compounds are made from a wide selection of base resins blended with fillers such as glass fiber, glass beads and carbon fiber. Toughblend® compounds are an excellent alternative to metal in applications for products requiring improved mechanical properties, special toughness, dimensional stability, temperature and chemical resistance. As compared to neat resins, Toughblend® offers spectacular improvements in terms of tensile strength, heat deflection temperature and coefficient of linear thermal expansion. As compared to metal, Toughblend® allows product engineers more freedom to design injection molded parts with the benefits of lighter part weight, excellent corrosion resistance, electrically non conductive. Most Toughblend® compounds also come with some other properties such as flame retardant, lubricated and colour.

Features:

- High Strength
- Total Strength
- Good Flexural Strength
- High Rigidity
- Toughness- Extreme High & Low Temperature Resistant
- Thermally Stable
- Low Mold Shrinkage

Typical Applications:

- Automotive Headlamps Housings
- Appliances Chassis
- Door Handles And Levers
- Automotive Battery Tray
- Power Hand Drill Tools
- Railway Insulators
- Engine Covers
- Automatic Gear Box Housings
- Business Machine Parts
- Industrial Basket Handle

结构增强改性塑料

Toughblend®改性塑料混合纯树脂和玻璃纤维，玻璃珠和碳纤以達到客户在成品研发的结构物性需求，结构工程热塑性改性塑料是一种很好的金属替代材料，运用于对强度，韧性，尺寸稳定，耐温和抗化学作用方面有要求的应用。

结构性改性塑料在钢性，抗拉强度，热变形，承受负荷能力和其他表现上，比纯树脂有明显的改善。与金属比较，这些材料可以让设计工程师任意选用成本低，重量轻，抗腐蚀性，不通电的注塑零件完成产品设计。大部份的结构性改性塑料结合其他物性如阻燃性，耐磨性和多种颜色选择。

特点： 强度高，刚性好，热稳定，低收缩，综合强度，韧性，耐高低温，挠曲性。

应用： 车灯外壳，引擎护盖，电动工具外壳和零件，汽车把手，打印机内部零件，汽车电池托盘，电器骨架，换挡器座，火车铁路分隔片，工业篮子把柄。



Air Conditioning Tri Leg



Headlamp Housings



Automotive Fan Grille



Hand Glove Holder



Air Conditioning Vent



Power Drill Mechanism



Automotive Battery Tray



Automotive Fog Lamp Housing



Air Conditioning Compressor blade



Water Heater Mechanism



Automotive Auto Transmission Housing



Hobby Fishing Reel



Auto Gate Housing



Automotive Fan Grille



Motorcycle Luggage Housing



Agriculture Sprinkler



Office Chair Back



Rotary Blade



Automotive Fan



Electrical Bush



Smoothblend® wear resistant compound offers superb lubricity by incorporating PTFE, Silicone and/or aramid fiber for applications demanding stringent wear resistant properties such as mechanical gears and moving mechanical parts. Smoothblend® compound is also formulated to meet stringent mechanical and thermal properties by incorporating reinforcing and/or mineral fillers. Smoothblend® compounds are made from engineering thermoplastics such as POM, PC, PA6, PA6/6, PPO etc.

This compounds help eliminate tedious and time consuming jobs relating to frequent physical external surface lubrication of machine and equipment moving components which results in highly durable and hassle free performance. Smoothblend® can also be formulated to be acid and corrosion resistance which makes it a far better alternative to metals.

Features:

- Low Coefficient Of Friction
- Self Lubricated
- Save Time & Effort

Typical Applications:

- Interior Components For Business Machines, Cameras, DVD Players.
- Bearings, Slides Gears And Other Mechanical Parts.
- Bushings And Sliding Components

耐磨损改性塑料

Smoothblend®改性塑料混合不同种类的纯树脂和聚四氟乙烯和硅树脂以提供卓越的耐磨和内润滑性能。我们的工程师也可以混合玻璃纤维和矿物和纯树脂, 以达到所需的结构和耐温的物性。Smoothblend®耐磨损改性塑料采用纯树脂工程塑料如 POM, PC, PA6, PA6/6, PPO等。Smoothblend®改性塑料免除了费时费钱的两次外润滑的工序, 此类材料使设备和部件保持清洁, 能长期使用, 性能可靠。另外, 内润滑的热塑塑料无论在水溶液, 酸还是碱的环境中, 都有非常好的抗氧化性和抗腐蚀性, 而金属零件在这些环境都会遭到损坏。

特点: 低磨损系数, 内润滑功能, 省时省力。

应用: 打印机内部零件, 数码相机, DVD放映机内部零件, 轴承, 滑片, 齿轮, 滑动部件。



Plastic Gears



Printers Guides



Bushing



Air Conditioner Switcher



Air Conditioner Sub Link
Foot



Air Conditioner Sub Link
Vent





Mineralblend® compounds combine copolymer polyolefin with calcium carbonate, mica, talc and wollastonite for improved rigidity, dimensional stability, heat deflection temperature, creep resistant. Mineralblend® is a good alternative to Glass Fiber reinforced polypropylene compound for less demanding application. Mineralblend® is widely used in automotive bumpers, automotive headlamp housing, badges/license plate holders, body side moldings, motorcycle leg shield, elegant furniture, home appliances housings etc. All Mineralblend® compounds can be coloured to meet stringent aesthetic requirements.

Product development personnel can opt for Mineralblend to replace PVC compound as it is less toxic and less abrasive for mold and toolings.

Features:

- Heat Resistant
- Low Mold Shrinkage
- Low Cost Alternatives.
- Good Rigidity
- Dimensional Stability

Applications:

- Automotive Interior Trims
- Automotive Headlamp Housings
- Air-conditioning Compressor Cover
- Automotive Bumper
- Number Plate Frame
- Motorcycle Headlamp Housing

矿物填充改性塑料

Mineralblend®改性塑料混合矿物充料如碳酸钙MICA, 滑石粉, 硅酸钙和PP, PE材料以达到刚性佳, 尺寸稳定, 耐高温等物性。在某些物性要求较低的情况下, Mineralblend®改性塑料可以取代玻纤增强改性材料以降低成本。Mineralblend®改性塑料广泛用在汽车防撞杆, 汽车灯壳, 车牌框, 高级傢俱, 家电用品等。所有Mineralblend®改性塑料都可以为客户配色和着色, 以达到客户在产品外观上的要求。产品研发人员可以取用Mineralblend® 改性塑料以取代PVC材料, 因为PVC材料带有毒性和会损害模具。

特点: 抗高温, 刚性好, 低收缩, 尺寸稳定, 低成本选择。

应用: 汽车内外饰件, 防撞杆, 车灯壳, 车牌框, 空调压缩机外壳, 电单车车灯罩。



Automotive Headlamp Housing



Automotive No. Plate



Automotive Cooling Fan



Automotive Air Intake Housing



Microwave Fan



Air Conditioning Compressor Outer Cover



Speaker Frame



Automotive Headlamp Housing



Automotive Headlamp Housing





Spectroblend® Precoloured unfilled resins is one our company specialty. We have the flexibility to colour most of the commercially available commodity and engineering thermoplastic such as PP, PE, ABS, HIPS, PC, NYLON, PC/ABS, PBT etc. We have one of the widest range of premium heat and colour stable pigments and dye selection which creates an attractive full spectrum of colour selection for our customers aesthetic requirement. Among some of the choices are opaque, translucent, metallic, silver and marble selection.

Due to increasing environmental awareness with the need for immediate attention to save our earth from catastrophic disaster, we have also developed green regenerative materials for our customers' corporate green image and EPEAT participation.

Most of our colour matching technical team has more than 15 years experience in the colour matching industries which imply fast and accurate colour matching for today's dynamic product design. In addition, we have over thousands of successfully matched library of colours for our customer to choose from. All matching is done by human experience as well as our advanced colour matching spectrophotometer and software.

Features:

- Stable Colour
- Heat Resistant Colour
- Abundance Colour Choices
- RoHS Complied

Applications:

- Printers Housing
- Remote Control Housing
- Home Appliances Housing
- Air Conditioning Casing
- Computer Monitor Frame



Spectroblend®预着色通用塑料和工程塑料纯树脂乃本公司的专长之一，我们的技术人员拥有丰富的经验以便可以着色大部分的通用塑料和工程塑料，如PP、PE、ABS、HIPS、PC、Nylon、PC/ABS、PBT等。本公司拥有种类繁多的热稳定和色泽稳定的颜料和色粉，以便可以为客户提供量身定制的颜色以满足客户的产品外观需求。本公司可提供多种独特的颜色效果，如不透光、半透明、金属粉、银粉和大理石效应等。

随着人类对立即拯救地球灾难的环境意识的日益加深，针对客户的绿色理念和EPEAT认证的需求，我们也开发了绿色可再生塑料以便可以满足客户的绿色企业形象和满足客户参予的EPEAT需求。

我们的配色技术人员大部分都拥有超过15年的配色经验，以便可以为我们的客户在最短的时间配出客户指定的颜色以应付现今充满活力的新市场。本公司拥有上千种颜色档案在我们配色数据库里以便可以任客户选择，所有的配色都是靠经验、先进的电脑数据和软件成功配置而成。

特点：色泽稳定持久，色彩耐热，颜色种类多，RoHS认证。

应用：打印机外壳，遥控器外壳，家电外壳，空调外壳，电脑显示器外壳等。



Printers & Audio Parts



Printers Chasis



Remote Control & Electrical Isolators



Automotive Air Cond Vent Housing



Wheel Chair Part



Speaker Housing



Computer Monitor



Computer Monitor



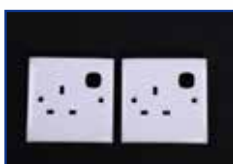
Fax Machine Housing



Computer Moniitor



Speaker Internal Part



Switch Socket Backplate



Electrical Isolator



Air Cond Cabinet



Air Cond W-Plate



In 1989-1993, fires that started in TV, radios, video player accounted to approximately 2400 home fires every year in the United States. Relevant authority has fully enforced household electrical appliances manufacturers to use flame retardant plastic materials to manufacture their products, number of home fires has been reduced to average 175 cases since then.

FRblend® is our company line of flame retardant thermoplastic compounds with different UL (Underwriter Laboratory, U.S.A) flammability ratings such as V-0, V-1, V-2, 5V and 5VA. Apart from the flammability properties, our technical engineers also combine other properties such as electrically conductive, wear resistant, structural reinforced and aesthetic pre-colouring into FRblend® compound to meet stringent customers' product design requirement.

The development of FRblend® formula is not solely based on the study of the base resin morphology, the size and thickness of the final molded product, the process of shear stress during the processing, mechanical and thermal properties required all plays a part in the formulation development

Features:

- Flame Retardant
- RoHS Compliance
- Good Processability
- Heat Resistant
- UL Yellow Card

Applications:

- Home Appliances Housing
- Electrical Power Socket
- Isolator Connector
- Lighting Housing
- Switches Back Plate
- Connector

阻燃级改性塑料

在1989-1993年，美国总共有2400宗火患都是来自电视机，电唱机和DVD放映机。美国有关单位强制家电生产商使用阻燃改性材料来生产家电，从此之后，美国的家电火患个案已下降到每年平均175宗火患。

FRblend®是本公司一系列的阻燃改性材料，大部FRblend®的等级已达到美国UL认证V-0, V1, V-2, 5V和5VA的防火标准。除了阻燃物性的考虑，本公司的技术人员把FRblend®的阻燃功能和其他功能结合起来，如导电，耐磨损，结构增强和染色性能以满足客户严格的产品设计。

在开发每个FRblend®阻燃材料的配方时，我们的技术人员不止研究树脂的本身特性，他们也需要考虑产品厚度和大小，材料在操作上所面对的剪切力，流动性，机械性能和热性能，都可影响新配方的开发。

特点：阻燃性，耐热，符合RoHS环保指令，UL黄卡认证，加工性佳。

应用：家电外壳，装饰灯壳，线缆套管，电插座，开关制背壳，交流接触器，连接器。



Electrical Cable Clip



Power Point Back Plate



Electrical Wire Bobbin



Capacitor Can



Switches Back Plate



Switches Back Plate



Electrical Cable Clip



Microwave Chassis



Iron Base



Printer Chassis





Electroblend® compound is our company's range of conductive compound (antistatic, statically dissipative, conductive and EMI shielding) by incorporating conductive particulate and/or fiber into the host resin to form a conductive matrix. Electrostatic Discharge (ESD) happens when a insulating surface is rubbed against another and the contacted surface are then parted. (ESD) can damage sensitive electronic components, erase magnetic media and set off explosion in highly flammable environment. Electroblend® static dissipative compound is a great solution to all these dangers by effectively dissipate charges before it gets above dangerous level. CIPC's Electroblend® compound can be tailored to offer full spectrum of electrical properties from 10^1 ohm/sq to 10^{12} ohm/sq.

Electroblend® compounds can be classified as follow:

- Antistatic Compounds (10^{10} to 10^{12})
- Static Dissipative Compounds (10^6 to 10^{11})
- Conductive Compound (10^1 to 10^6)
- EMI Shielding Compounds (10^1 to 10^4)



Electroblend® antistatic and conductive compound is a superb alternative to metal for several reasons such as lighter part weight, design freedom, cost effectiveness, balance physical properties.

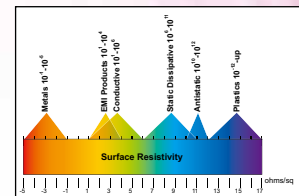
Electroblend® EMI compounds offer reliability for applications where electromagnetic compatibility is required. EMI shielding compounds provide immunity for sensitive components from incoming electromagnetic interference (EMI) and/or prevents excessive emissions of EMI to other susceptible equipment.

Features:

- Antistatic
- Good Rigidity
- Conductive
- Good Processability
- Lower Part Weight
- Cost Effectiveness
- Design Freedom

Applications:

- IC Chip Tray
- PCB Board Storage Rack
- Antistatic Industrial Container



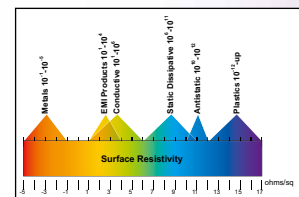
导电和抗静电改性塑料

Electroblend®是公司的导电系列改性塑料。我们使用不同的导电添加剂如碳黑粉末，碳和金属纤维和金属粉末以达到抗静电，静电消散，导电和电磁波干扰(EMI)屏蔽的功能。

当两个绝缘表面互相接触和磨擦之后突然分开，静电放电(ESD)就会产生。静电放电(ESD)足以摧毁敏感的电子元件，会消除或改变有磁性的介质，在易燃的环境也会产生爆炸。Electroblend®导电材料能在电荷累积到危险程度之前就将其释放掉。CIPC的Electroblend®改性材料可为客户提供一系列的表面电阻率在 10^1 到 10^{12} 欧姆/平方之间。

根据其电阻性能，Electroblend® 可分为以下几种拥有不同电阻的塑料：

- 抗静电材料 (10^{10} 到 10^{12} 欧姆/平方之间)
- 抗静电消散材料 (10^6 到 10^{11} 欧姆/平方之间)
- 导电材料 (10^1 到 10^6 欧姆/平方之间)
- 电磁波干扰(EMI)屏蔽材料 10^1 到 10^4 欧姆/平方之间)



Electroblend®抗静电和导电改性塑料是很好的金属替代品，其优点包括较轻的零件以便减低运输成本，给予产品设计师很大的设计空间和自由，平衡的机械物性等。

Electroblend®EMI屏蔽改性塑料可靠且适用于电磁相容的地方。Electroblend®EMI改性塑料可使具敏感性元件产生免疫力以便可以免于EMI辐射，并可以防止辐射物质影响其他具敏感性的设备。

特点：抗静电，导电，刚性好，加工性佳，重量较低，设计自由，低成本。

应用：IC晶片盘，IC夹，PCB板储存盘，抗静电工业容器。



IC Trays & Tweezers



PCBA Board Storage Rack
Conductive



PCBA Board Storage Rack
Conductive



Conductive Sheet



IC Reel



PCBA Storage Rack



Loyblend® is CIPC's line of thermoplastics alloy such as PC/ABS and PC/PBT with different flow and thermal properties. Loyblend® PC/ABS is a compounded blend of polycarbonate and ABS. The PC contributes impact and heat distortion resistance, while the ABS contributes processability and chemical stress resistance. Loyblend® PC/ABS is used for portable appliances, handphones, printer enclosures, automotive instrument panel retainers, laptop computer cases, camera housings, disk drives chassis etc. Loyblend® PC/PBT is a compounded blend of Polycarbonate and PBT. The PC contributes impact, stiffness and heat resistance, while the PBT contributes chemical resistance. The usual moisture sensitivity of the crystalline PBT is overcome by the PC in the blend. Loyblend® PC/PBT is used in automotive side moldings, lawn and garden hoods, hand tool housings etc.

Features:

- High Flexural Strength
- Good Toughness
- Good Rigidity
- Good Processability
- Heat Resistant

Applications:

- Automotive Parts
- LCD Television Frame
- Automotive Speedometer Panel
- Camera Housing
- Automotive Air Cond Vent Outlet

合金塑料

Loyblend®是本公司合金材料如PC/ABS和PC/PBT拥有不同的流动性和热性能。Loyblend® PC/ABS合金的形成是取之PC的高冲击强度，耐高温性能和ABS的加工性能佳，抗学作用特性。Loyblend®PC/PBT的形成是靠PC的冲击强度和PBT的抗化学特性。在PC/PBT合金里，PC可以减低PBT对湿度的敏感性。

特点：挠曲性，刚性和耐热佳，韧性，加工性佳。

应用：汽车部件，仪表板，出风格，电视机外壳，相机外壳。



Computer Part



Remote Control Holder



Handphone Frame



DVD Player Front Panel



Printers Mechanism



Power Window Chasis



Automotive Meter Hood



Automotive Centre Console



Glove Box Inner Cover



Glove Box Inner Cover



Upper Case Remote Control



Upper Case Remote Control



Computer Monitor



Monitor Base





Flexiblend® compound is our company's range of rubber modified polypropylene compounds developed mainly for applications requiring different range of flexibility and impact strength by incorporating varying levels of mineral fillers and impact modifiers. Flexiblend® is developed by combining the inherent flexible properties of natural rubber with the superb processibility of rubber modified thermoplastic compound. Flexiblend® compounds feature izod impact strength range from 80 J/m to 580 J/m and flexibility range from shore A 70 to shore D 80. Flexiblend can be processed by using hi speed and precise injection molding, sheet extrusion machines or blow molding machines to make products with different flexibility and hardness.

Features:

- High Toughness
- High Tensile Elongation

Applications:

- Automotive Bumpers
- Automotive Instrument Panel
- Automotive Internal and External Moldings

橡胶改性塑料

Flexiblend®橡胶改性塑料是CIPC研发的聚丙烯改性材料主要应用于产品需要不同的冲击强度强和弹性。**Flexiblend®**改性塑料拥有不同含量的矿物和冲击改质剂以达到不同的效果。**Flexiblend®**结合了传统天然橡胶的弹性体改性塑料的加工性能。**Flexiblend®**的冲击强度可由 80J/M 到 580 J/M，其硬度则由shore A70 到 shore D80 。**Flexiblend®**可使用高速，精準，有效益的注塑，挤压或吹塑加工方式以生产名种富有弹性的改性塑料。

特点：高冲击韧性，高拉力比率。

应用：汽车防撞杆，汽车仪表板，汽车内外嵌线。



Automotive Bumpers
Front & Back



Steering Cover



Steering Cover



Boot Trim



Door Panel or Door Trim



Panel Shelf



BioEcoBlend is made from renewable biodegradable resources featuring low carbon footprint. BioEcoBlend possess the advantage of being 100% compostable coupled with endless colouring possibilities. It is generally marketed as a fully biodegradable alternative to polyethylene, possessing many similar properties such as flexibility and resilience, allowing it to be used for many similar application such as plastic bags and wraps. BioEcoBlend comes in two forms; compounds and packaging.

Our BioEcoBlend compound is a compostable and biodegradable biopolymer. BioEcoBlend compounds are fully biodegradable and conform to compostability international standard i.e Europe's EN 13432, USA's ASTM D6400, Japan's Green Pla and Australia's AS4736. This grade offers fully functional and fully compostable characteristics. It is often used to reduce the volume of waste in packaging materials. There is also significant effort to replace materials derived from petrochemicals with those that can be made from biodegradable components. The processing method can be blow film and injection molding.





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Our BioEcoBlend packaging is a good alternative to conventional plastic as it is formulated for sustainability. It is recyclable and is customisable without compromising its property of great strength and durability. BioEcoBlend packaging can be safely consumed, degrade quickly, and often be created from waste plant products. All products are compostable and biodegradable without adding any harmful chemicals.





Masterbatch is a solid plastic additive used to color or impart other properties to plastics.

Colour masterbatch is obtained by the distribution of colours and additives into a polymer carrier by heat treatment and in particular a high shear mixing extruder is called masterbatch. The mixture is then cooled, cut and formed into granules via a pelletiser. Masterbatch allows the processor to colour raw polymer economically during the plastics manufacturing process.

Masterbatches are highly concentrated with high let down ratios, one tonne of a natural polymer can fit into a 25 kg bag. Masterbatches dilute nature, allowing higher accuracy in dosing of expensive components. Colour Masterbatches solid crystals are solvent free and tend to have a longer shelf life as the solvent in the polymer won't evaporate. They generally contain 40-65 percent additives, but the range can be altered from 15-80 percent in a few additional cases.

Some of the most valuable benefits of masterbatch

- When compared to raw pigments, masterbatch allows for higher accuracy of controlling the opacity or transparency of final, colored products.
- Predetermined ratios of additive ingredients are included in masterbatch, which means there is a minimal chance of variance during the manufacturing process.
- Masterbatches give users better color consistency when working with large orders.
- Melting processes are improved because binding agents in masterbatch are matched with polymers being used.
- Unlike masterbatch, pigments can become airborne during processing, which allows them to contaminate adjacent manufacturing lines.

Other Benefits of Masterbatch

Easier incorporation of additives:

Masterbatches allow for less complex addition by pellet-to-pellet mixing or direct addition into the extruder. A special dosing device is not required for colour consistency.

Improved Product Consistency and Process Stability:

The use of an additive masterbatch also improves product consistency and process stability through better dispersion.

Safer Handling of Hazardous Materials:

Many additives are hazardous or corrosive in their pure form. Masterbatches encapsulate the additive in a polymer resin or a liquid. This encapsulation reduces or in many cases eliminates the additive's corrosiveness. It also eliminates the numerous potential hazards of handling powders. These features result in fewer technical controls and less personal protective equipment (PPE) requirements.

Cleaner Production:

In addition to being safer to handle, masterbatch additives are also cleaner. There is no color pigment or other powdered additive to spill or statically attach to surfaces. The result is a cleaner production area, reduced cross-contamination, and potentially quicker transitions between different products.

Increased Additive Stability and Shelf-Life:

The masterbatch can help protect the additives from exposure to humidity, temperature and UV during storage.

Easier Incorporation of Antimicrobial Technology:

Research shows that antimicrobial technology incorporation is as simple as possible for our customers, taking advantage of the extensive benefits of masterbatches.

Performance Masterbatches for Film Industry

In all kind of plastic films for flexible packaging and industrial applications, anti-blocking properties are very important for further handling and converting. Plastic layers tend to stick together. The addition of an anti-block masterbatch creates space between two plastic layers (surface roughness) preventing so-called blocking.

Anti-block masterbatch, specially formulated to give faster migration & better open ability. The processing of plastics films will be disturbed by a high coefficient of friction. This tendency to adhere to metal surfaces and to other film surfaces will be a limiting factor for high-speed processing applications as packaging and handling of films. Anti-block masterbatch are added to reduce the surface coefficient of friction of polymers and are used to enhance either processing or end applications. Further benefits are excellent seal ability and weld ability.

Anti-block masterbatches have a low compatibility with the polymer which allow migration to the film surface. A good control of the compatibility controls the migration speed and thus the speed of acting performance can be engineered.

Exhibition Since 2008

TOUGHBLEND® - Reinforced Compounds
结构增强改性塑料

Smoothblend® - Wear Resistant Compounds
耐磨损改性塑料

MINERALBLEND® - Mineral Filled Compounds
矿物填充改性塑料

Spectroblend® - Pre Coloured RoHS Complied Virgin
and Green Regenerative Compounds
精密着色 RoHS 认证新料和
环保再生塑料

FRblend® - Flame Retardant Compounds
阻燃级改性塑料

Electroblend® - Conductive & Static Dissipative Compounds
导电和抗静电改性塑料

LOYBLEND® - Thermoplastic Alloy Compounds
合金塑料

FLEXIBLEND® - Rubber Modified Compounds
橡胶改性塑料

BioEcoBlend™ - Compostable Sustainable Compounds
可堆肥的可持续化合物

BioEcoBlend™ - Compostable Sustainable Packaging
可堆肥可持续包装

MasterBlend™ - Aesthetic & Performance Masterbatches
美学和性能色母粒



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Plastic Technologies Enlighten Life

Colour Image Plastic Compound Sdn. Bhd. (Co.No. 527104-T)

HQ - Plant 1 :

PT 59218, Jalan Balakong Jaya, Taman Perindustrian Balakong Jaya,
43300 Seri Kembangan, Selangor, Malaysia.
Telephone : +603-95480315, +603-95493524

Plant 2 :

Lot 557 (GM 340), Mukim Hulu Semenyih, Daerah Hulu Langat, Selangor Darul
Ehsan, Malaysia.

Johor Sales/ Technical office :

CK Tan (Assistant Marketing and Technical Manager)
Mobile : +6012 - 2127306
Email : ck.tan_mktg@cipcresin.com

Business Contact :

Lawrence Ong (Executive Director)
Mobile : +6012 - 2235891
Email : lawrence.ong@cipcresin.com

Linus Cheong Yong Sheng
(Marketing and Sales Manager)
Mobile : +6012 - 2270912
Email : yscheong_mktg@cipcresin.com

Yong Yao Sheng (Marketing Executive)
Mobile : +6017 - 2985292
Email : yaosheng_mktg@cipcresin.com