

AUTOMOTIVE



01 - USAGE

Multibase offers materials that fit to all major automotive manufacturers worldwide. Well-known in the production of automotive parts, Multiflex™ TPE / TPO meet and exceed all properties requested for the production of Airbag covers, under the hood and inside vehicle shapes. Our automotive markets: Automotive safety, Aesthetics, Weather and thermal insulation and reinforcement.

02 - AESTHETIC PROPERTIES

Material is able to fit to variety of aesthetic requirements such as appearance matching (mat, gloss, no-tiger strips and color matching) but also to tactile appreciations (from tacky to dry and from Plastic to skin touch). With our unique technology based on silicone, Multibase offers several resistances: mar, scratch and abrasion resistance.

03 - MATERIAL PERFORMANCES

Multibase provides a wide range of hardness (from 10 Sh.A to 60 Sh.D).

The high fluidity of Multiflex™ enhances to design of complicated shapes and parts (long and thin parts).

For Automotive safety mainly Airbag covers: Multiflex™ meets high level deployment performances (-35°C up to +90°C), painted and unpainted grades.

For reinforcement shapes: Multibase provides innovative solutions for novel parts and weight reduction. For aesthetics, product range enhances color matching, tactile appreciation and allows creativity in shape design.

For weather and thermal insulation, Multibase offers high technicity materials: durability (good compression set, relaxation at high levels ...), very high flow and much more.

For reinforcement parts: Multibase offers solutions with excellent durability, dimensional stability as well as mechanical properties.

04 - PROCESSING

Multibase materials are processed via standard thermoplastic techniques (injection molding, over-molding, co-molding and extrusion).

05 - SUSTAINABILITY

Multibase materials are recyclable materials, PVC free, eco-friendly plasticizers, REACH compliant.

They also offer the advantage of optimize the process (cycle time).

Specific available solutions provide weight reduction of reinforcement parts.

06 - ECONOMICAL VALUE

Multibase grades can be reprocessed easily and permits mold conception for bi-material processing (Overmolding). No post-curing and pre-drying are necessary.

They enable the replacement of over engineering technical thermoplastics.

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com

COMPATIBILITY

USAGE

Multibase offers multiple possibilities in terms of compatibility and adhesion on technical polymers and polyolefins.

Multiflex™ TPE, Multiflex™ TPO, Multiflex™ TEA, SiE, TPSiV® help you to achieve your expectations.

OUR SOLUTIONS ?

Your needs	Multiflex™ TPE	Multiflex™ TPO	Multiflex™ TEA	SiE	TPSiV® Serie 3000	TPSiV® Serie 5000
PP	■	■		■		■
PE	■	■		■		■
EVA	■			■		■
PVC					■	
PC			■		■	
PU					■	
ABS			■		■	
ASA			■		■	
SAN			■		■	
PMMA			■		■	
PETG			■			
Cellulosics (CP – CA)			■			

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com

CONSUMER AND INSULATION

01 - USAGE

Multibase offers materials that suits to insulation and protection sealing applications (window and door seals), household appliances (shower and fridge seals) and industrial electronic protection equipments (electrical protection plugs) and finally solar market (encapsulate for photovoltaic environment). Multiflex™ TPE materials are grades we strongly recommend for all your consumer and insulation appliances.

02 - AESTHETIC PROPERTIES

Material is available in variety of colors (transparent, mat, glossy), specific color according RAL and finally customized stains. For shower sealing, we offer easy to clean, dust free and high level of slippery products.

03 - MATERIAL PERFORMANCES

Multiflex™ provides excellent performances under extreme weather environment (flexibility at low temperature, thermal and UV resistances, hardness panel from 0 Shore A to 40 Shore D, compression set). More than bonding on most of usual polymers, it is also weldable and laser printable.

04 - PROCESSING

Multiflex™ Consumer and Insulation grades are processed via standard thermoplastic techniques (mainly extrusion, co-extrusion, post-extrusion), but is also suitable for injection molding (mono and bi material injection).

They can be processed for magnet co-extrusion.

05 - SUSTAINABILITY

Multiflex™ are recyclable materials, PVC free, eco-friendly plasticizers, REACH compliant.

Certified CSTB and RAL grades are available.

Some products are FDA approved for contact with foodstuffs.

06 - ECONOMICAL VALUE

Multiflex™ thermoplastic elastomers can be reprocessed easily and permits mold conception for bi-material processing. No post-curing and pre-drying are necessary.

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com



MINERAL FILLED POLYOLEFIN

Multibatch®:

OUR SOLUTION OF MINERAL FILLED POLYOLEFIN

Masterbatches

Multibase offers a wide range of high filled polyolefin masterbatches, containing up to 75% of mineral filler such as CaCO₃, CaCO₃+TiO₂ or talcum. They are intended to be used in dilution in virgin polyolefins.

The diversity of this specific material range allows selection of the optimum solution in terms of performance vs cost.

Multibatch® significantly improves the antiblocking properties for polyethylene films, antifibrillation and tenacity for yarn applications. It also enhances thermal resistance of sheet extrusion for direct foodstuff contact as well as for

industrial use.

The Multibatch® range is well-known for its exceptional quality of filler dispersion and processability.

Principal features:

- Improve the antiblocking properties of PE films,
- Improve the anti-fibrillation and strength for yarn application,
- Improve the thermal resistance and organoleptic properties,
- Production of thin gauge BOPP films,
- Improve the permeability for breathable films.

MULTIPRO®: **READY TO USE SOLUTION OF POLYOLEFIN COMPOUNDS**

Multipro® materials range provides a comprehensive range of compounds offering good resistance to the most stringent conditions.

Multibase enhances its products with improved UV and detergent resistance properties and with thermal stabilizers fully customized to extend their field of application.

Principal features:

- Customized ready for use compounds,
- Customized colors,
- Customized resistances (UV, heat, detergent).

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com



PACKAGING

01 - USAGE

Multibase offers a wide range of masterbatches destined to packaging industry: industrial, foodstuff, cosmetics and pharmaceutical. Concerned material ranges: Multiflex™, Multibatch®, Multipro®, Siloxane Masterbatch and TPSiV®.

02 - MATERIAL RANGE PERFORMANCES

Each material range has its own particular properties such as: soft touch, opacity, haze, visual aspect (gloss, mat, pearalized). Some grades are able to be printed.

Multibatch® product range improves: density, antiblocking, rigidity, pre-cutting, printability, weldability, thermal resistance, dimensional stability, machine output, dispersion of fillers and additives.

Multipro® product range provides: UV, detergent and antistatic resistances. Those grades offer also surface hardness and gloss level similar to technical Polymers.

Multiflex™: Wide range of hardness's from ShA : 00 to ShD: 50. Extremely good bonding onto all polyolefins, allow function integration / combinations like soft - hard, housing - seal, translucent - opaque.

Siloxane Masterbatches: Non migratory slip additives: allow to efficiency reduce CoF, scratch and mar resistance, whatever the temperature is, and allow some differential slip.

TPSiV®: plasticizer free thermoplastic silicones. Unique soft touch feeling and high performance elastomers.

03 - ADDITIONAL FUNCTIONALITIES

Multibase material ranges achieve also following functionalities : odor or moisture absorber, light or gas barrier, thermal insulation, thermal conductivity, water resistant, imprints ...

04 - PROCESSING

Multibatch®: blow film, sheet extrusion, BOPP, thermoforming, corrugated sheets, melt coating, PP yarn, injection molding. Multipro®: injection and bi-injection, overmolding. Multiflex™ : injection and extrusion TPSiV®, SiE and Siloxane masterbatch: injection, bi-injection.

05 - SUSTAINABILITY

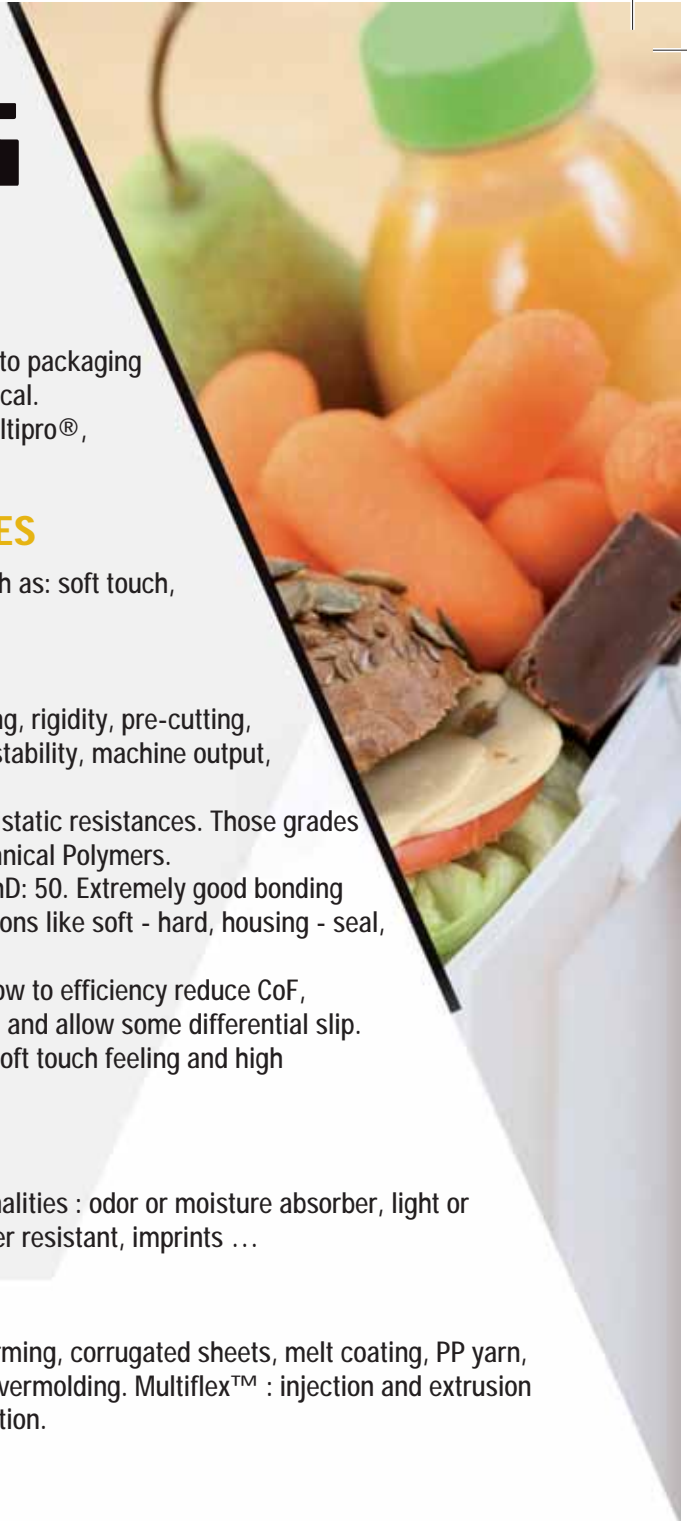
Multibase products are recyclable, PVC free, eco-friendly plasticizers, REACH compliant. Most of the grades are FDA foodstuff approved.

06 - ECONOMIC VALUE

Multibatch® and Multipro® materials are cost effective sustainable solutions towards cycle time reduction, thickness reduction, weight reduction thus polymer and energy consumption.

Multiflex™ offers versatile solutions to all sorts of function integration, leading to significant cost saving in assembling step.

Siloxane masterbatches are interesting solutions for tacky polymer processing, hot feeding packaging and high speed packaging (HFFS & VFFS) where consistent properties versus temperature and differential slip are of high interest.



SILICONE BASED TECHNOLOGY



SILOXANE MASTERBATCH

Siloxane masterbatch are ultra high molecular weight (UHMW) Siloxane based performance enhancing additives for the plastic industry.

These materials consist of 25-50% of UHMW Siloxane dispersed in a thermoplastic matrix (LDPE, LLDPE, HDPE, PP, Nylon6, Acetal, HIPS, SAN ...).

Principal features:

- Reduce coefficient of friction (static and dynamic),
- Enhance scratch and mar resistance,
- Improve processing of highly filled compounds (organic and inorganic),
- Provide hydrophobic and consistent properties at wide range of temperature,
- Improve tactile properties of synthetic fibers.

SILICONE ELASTOMERS - SIE

These materials are silicone based thermoplastic elastomers that provide an excellent balance between the benefits of silicone (soft touch, silky luxury feel as well as an excellent scratch and mar resistance) with those of thermoplastic elastomers (low hardness, excellent processability and recyclability).

Principal features:

- Unique touch,
- Improve aesthetic surface aspect,
- Enhance processability (high flow),
- Provide excellent weatherability,
- Easy color matching.

THERMOPLASTIC SILICONE VULCANIZATE - TPSiV™

TPSiV® are silicone-based thermoplastics issued from a unique, patented technology which contains no plasticizers.

These materials are particularly advantageous for the tactile properties they offer. Moreover they also enhance excellent bondability to most technical polymers and are also well adapted to harsh environment.

Principal features:

- Provide a unique sense of touch (dry and silky),
- Wide performance temperature window,
- Bonding to most of technical polymers,
- Thermally stable over time,
- Easy color matching

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com

SILOXANE MASTERBATCH



WHAT ARE SILOXANE MASTERBATCH ??

Dow Corning® Siloxane Masterbatches are pelletized micro-dispersions of special ultra high molecular weight Siloxane polymers, in various different plastic carrier resins at loadings of up to 50%.

HOW ARE SILOXANE MASTERBATCHES PRODUCED ?

Material is able to fit to variety of aesthetic requirements such as appearance matching (mat, gloss, no-tiger strips and color matching) but also to tactile appreciations (from tacky to dry and from Plastic to skin touch).

With our unique technology based on silicone, Multibase offers several resistances: mar, scratch and abrasion resistance.

MATERIAL PERFORMANCES

Without modifying the polymer matrix properties, Siloxane Masterbatch eliminates blooming as well as migration of fluids and other organic plastic additives, which can occur when using lower molecular weight silicone materials :

These unique masterbatches are typically used :

- to improve touch and feel,
- to modify the surface of finishing plastic parts for friction management,
- to improve mar resistance and wear resistance,
- as process aids to increase melt flow for cycle time reduction.

Low concentrations (0.1 – 1.0%) of these Siloxane Masterbatches offer :

- increased compounding efficiency,
- improved polymer flow and mold filling,
- cycle time reduction,
- lower extruder torque,
- easier mold release.

Concentrations of 1% to 5% Siloxane can provide significantly improved surface properties, including better lubricity, gloss and slip and improved mar and scratch resistance. These masterbatches can meaningfully reduce the coefficient of friction of a polymer without affecting post-finishing operations such as printing, plating and painting.

PROCESSING

Siloxane Masterbatch can be used in injection and extrusion with conventional thermoplastic techniques. Due to its ultra-high molecular weight, Siloxane Masterbatch doesn't create deposit or migration into the equipment.

SUSTAINABILITY

Siloxane masterbatches are recyclable materials, PVC free, eco-friendly plasticizers, REACH compliant. Most of the grades are FDA food contact approved.

ECONOMICAL VALUE

This technology offers the advantage to reduce processing cycle time. They provide differentiated benefits vs other traditional materials especially in terms of replacement of over engineered technical thermoplastics.

SOFT TOUCH



SOFT TOUCH CONCEPT

EXPECTED PROPERTIES :

For an optimum soft touch sensation, Multibase inspire your senses with its own :

Visual approach:

Ergonomics, shape, color and surface effect.

Tactile approach:

Properties enhance by materials itself and combination of hard and soft products.

VISUAL PROPERTIES

Due to their facility in process, Multiflex™, SiE and TPSiV® materials allow all creativity in shapes and surface aspects.

All our Multiflex™, SiE and TPSiV® products can easily be colored in all shades.

Translucent to transparent material offer is now available with Multiflex™ general purpose material Range.

Using combination of all TPE over-molded on rigid polymers allows innovativeness in design.

TACTILE PROPERTIES

Multiflex™, SiE, Siloxane Masterbatch and finally TPSiV® enhance tactile effects and feelings: tacky, grippy and dry skin touch.

The incorporation of Siloxane Masterbatches in a wide range of polymers (TP, TPE and TPV) may also help to enhance visual and tactile properties.

A soft / hard combination helps to achieve a specific sense of touch.

PROCESSING

Multibase materials are processed via standard thermoplastic techniques : injection molding, over-molding, co-molding, extrusion and co-extrusion.

SUSTAINABILITY

Multibase products are recyclable materials, PVC free, eco-friendly plasticizers, REACH compliant.

They also offer the advantage of optimize the process (cycle time).

Some grades are FDA approved (foodstuffs contacts).

ECONOMICAL VALUE

Multibase grades can be reprocessed easily and permits mold conception for bi-material processing (Overmolding). No post-curing and pre-drying are necessary.

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com

STRUCTURAL PARTS

01 - USAGE

Multibatch®, Multipro® and micro-talc products particularly suit to structural pieces for Household, technical automotive parts, industrial rigid electrical parts, furniture and construction appliances.

02 - AESTHETIC PROPERTIES

For each researched property we have a solution: customized colors and surface finishes, enhancement of ageing performances and of various visual domains. Many solution approaches are possible with Multibase materials (ageing properties, scratch and mar resistances ...).

03 - MATERIAL PERFORMANCES

Structural parts materials offer enhanced mechanical performances (stiffness, impact and density), temperature resistance, better dimensional stability and ageing properties.

04 - PROCESSING

Multibase references are processed via standard thermoplastic techniques: mono and multi-material injection and extrusion.

05 - SUSTAINABILITY

Multibase products are recyclable materials, PVC free and REACH compliant. Most references are FDA / EU 2002/72 approved for food applications.

06 - ECONOMICAL VALUE

Multibase products can increase productivity through reduced cycle time, part weight reduction (micro-talc). Cost effective alternative against other polymer solutions.

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com



THERMOPLASTIC ELASTOMERS TECHNOLOGY



THERMOPLASTIC ELASTOMERS TECHNOLOGY

Multibase manufactures a wide range of thermoplastic elastomers from 0 Shore A to 55 Shore D.

Thermoplastic elastomers combine the unique elastic and soft touch characteristics of conventional thermoset rubber with the ease of processing and recyclability of thermoplastics.

The flexibility in formulating our Multiflex™ grades, offers designers and specifiers more freedom in developing solutions.

Multibase has been the leading player in the TPE overall business for more than 15 years. Major industrial users trust our expertise and reputation in formulating and compounding more innovative solutions.

Multiflex™ are thermoplastic elastomers based on different polymers: SBS, SEBS, polyolefin's or other engineering polymers.

Principal features:

- Hardness ranging from 0 Shore A to 55 Shore D,
- Soft touch, acoustic properties and high flow,
- Excellent elastomeric memory up to 120°C,
- Impact resistance at low and high temperatures,
- Excellent bondability to most technical polymers,
- Excellent UV and heat resistance, Recyclable.

Processing technologies:

Multiflex™ materials are recommended for injection molding, over-molding, extrusion (mono, co-extrusion, post co-extrusion) and blow-molding. They are recyclable.

TPSiV®, Multibatch® and Multipro® are registered trademarks of Multibase®. Siloxane Masterbatch Dow Corning® is a registered trademark of Dow Corning Corporation. Multiflex™ is a trademark of Multibase®. Multibase® is a registered trademark of Multibase company.

www.multibase.com