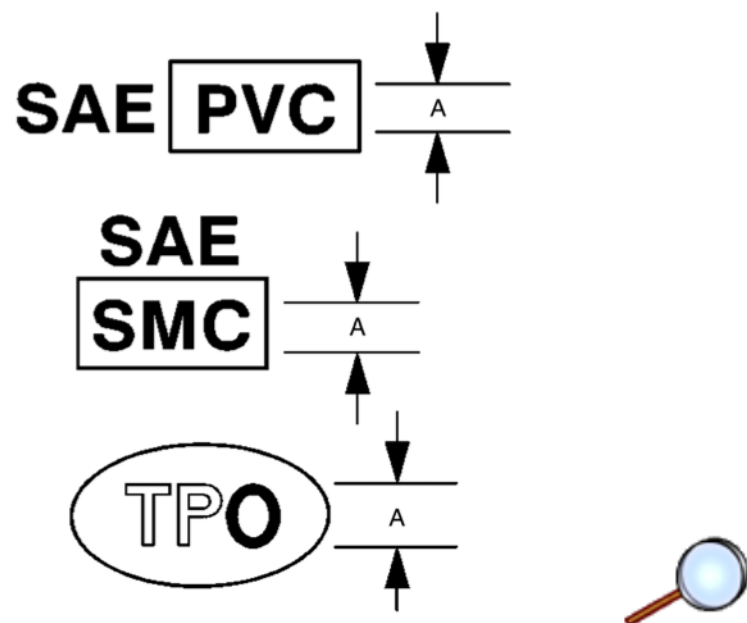


How to Identify Plastic Parts



Plastic parts can be identified by the SAE code, which is usually found on the rear of the part, and/or by the characteristics of the plastic. Knowing the type of plastic aids in selecting the proper repair materials and in selecting the proper repair procedure.

Look for the SAE code stamped into the part.

Code Found

Match the code to those in the plastic identification chart to determine whether the plastic is thermoplastic or thermoset plastic, and whether the plastic is rigid or flexible. Refer to [Plastic Identification and Refinishing Systems](#).

No Code Found

Warning: Do NOT use a plastic burn test to distinguish the type of plastic. The burn test produces vapors which are harmful.

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Perform one or both of the following tests to determine if the part is thermoplastic polyolefin or thermoset non-polyolefin.

Float Test

1. Cut a shaving of plastic from the back of the part.
The shaving should be free of mould release agents and paint.
2. Place the shaving in a container of water.
 - Thermoplastic polyolefin floats.
 - Thermoset non-polyolefin sinks.

Abrasion Test

- Sand a spot near the damaged area with Grade 36 Roloc Disc.
- Thermoplastic polyolefin material melts or frays when sanded.
- Thermoset non-polyolefin material sands cleanly.

Thermoplastic and thermoset plastics can be either rigid or flexible. Thermoplastic plastic parts are best repaired with a hot iron plastic material-feed welder, but are usually replaced. Thermoset plastic can be repaired with epoxy or other more rigid 2 package repair material.

- For rigid thermoset repair materials, refer to [Rigid Plastic Part Repair Materials](#).
- For flexible thermoset repair materials, refer to [Flexible Plastic Part Repair Materials](#).
- For general repair instructions, refer to [General Plastic Repair](#).

Plastic Identification and Refinishing Systems

Plastic Identification and Refinishing Systems

Identifying Symbol– Old Symbol in ()s	Chemical Composition or Plastic Family Name	Typical Area(s) Where Part is Used	Examples of Common/Trade Names	Type of Plastic
ABS	Acrylonitrile/ Butadiene- Styrene	Armrest Support, Console, Instrument Panel Console, Steering Column Bracket/Jacket, Trim Molding	ABS, Absafil, Magnum, Cycolac, Dyel, Kralastic, Lustran	Thermoplastic
ABS + PC	Acrylonitrile/ Butadiene- Styrene + Polycarbonate	Instrument Panel, Instrument Panel Console	Bayblend, Cycoloy, KHA, Pulse	Rigid
ABS/PVC	ABS/Vinyl (Soft)	Head Rest Cover, Instrument Panel Pad, Trim Molding/Panel	ABS Vinyl	Flexible, Vinyl
EPDM	Ethylene Propylene Diene Monomer	Body Panel, Bumper Impact Strip	EPDM, Nordel	Rigid
EVA (EVAC)	Ethylene/Vinyl Acetate	Head Rest Cover, Miscellaneous Soft Trim	Elvax, Microthane	Flexible
PA	Polyamide	Headlamp Bezels, Exterior Finish Trim Panels	Nylon, Capron, Zytel, Rilsan, Minion, Vydyne, Welland	Rigid
PA, PAG, PAGG	Polyamide	Exterior Finish Trim	Capron, Minlon, Nylon, Rilsan, Vydyne,	Rigid, Thermoset

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		Panel, Headlamp Bezel	Wellamid, Zytel	
PA + PPE	Polymide + Polyphenylene Ether	Exterior Trim	GTX	Rigid, Thermoset
PBT + TEEE (PBTP + EEBC)	Polybutylene, Terephthalate + Ether, Ester Block Compound	Fascia, Rocker Panel Molding	Bexloy M	Rigid
PC	Polycarbonate	Interior Rigid/Hard Trim Panel, Valance Panel	Calibre, Lexan, Merlon, Makrolon	Rigid, Thermoset
PC + PETP	Polycarbonate + Polybutylene, Terephthalate	Bumper Fascia	Macroblend, Valox, Xenoy	Flexible, Thermoset
PE	Polyethylene	Interior Trim Panel, Seat Belt Cover, Spoiler, Valance	Alathon, Dylan, Foriflex, Hi-fax, Hosalen, Marlex, Paxon	Rigid, Thermoplastic
PF	Phenol Formaldehyde	Lower Storage Compartment	Amberol, Bakelite, Durez, Genal, Phenolic, Plyophen, Resinox	Rigid, Thermoset
PP	Polypropylene	Bumper Fascia, Air Inlet Grille Panel, Deflector Panel, Door Panel, Wheelhouse Liner, Interior Molding, Kick Panel, Load Floor, Radiator Shroud	Azdel, Daplen, Escorene, Marlex, Novolen, Oleflo, Profax, Tenite	Flexible, Thermoplastic
PPE (PPO)	Polyphenylene Ether	Bezels, Chromed Plastic, Headlamp Door, Ornaments	Noryl, Oleflo, Prevex	Rigid, Thermoset
			Durathon, Dylan,	

PS	Polystyrene	Dash Panel, Door Panel	Lustrex, Polystyrol, Styron	Flexible, Soft
PUR	Polyurethane, Thermoset (Unsaturated)	Bumper Fascia, Filler Panel, Front/Rear Body Panel	Bayflex, Castethane, RIM, RRIM, SRIM	Thermoset
PVC	Polyvinyl Chloride (Vinyl)	Interior Soft Trim, Instrument Panel Skins	Geon, Pliovic, Unichem, Vinoflex, Vinyl, Vinylite	Flexible, Vinyl
SAN (SA)	Styrene Acrylonitrile	Centre Console, Glove Box Door, Interior Trim Panel	Foracryl, Lustran, Tyril	Rigid
TEO (EP, EPM, TPO)	Ethylene/Propylene (Rubber)	Bumper Fascia, Valance Panel	EPI, EPII, TPO, TPR (Thermoplastic Rubber)	Flexible, Thermoplastic
TPO	Thermal Plastic Oletin	Bumper Covers	TPO	Flexible Thermoplastic
TPU (TPUR)	Polyurethane, Polyolefin	Bumper Fascia, Soft Filler Panel, Window Molding	Estane, Pellethane, Roylar, Toxin	Flexible, Thermoplastic
UP	Polyester/Thermoset	Fascia Extension, Instrument Housing, Air Conditioning Air Deflector	Fibreglass, Premi-glass, Selectron, SMC, Vibrinmat	Rigid, Thermoset

General Plastic Repair

Warning: In order to reduce the risk of personal injury when exposed to toxic fumes while grinding, cutting, or applying repair material on any type of sheet molded compound or RIM rigid plastic, observe the following guidelines:

- Work in a properly ventilated area
- Apply protective cream to any exposed skin
- Remove any mixture that comes into contact with skin
- Wash skin with cold water to remove glass and resin dust
- Use a sander with a vacuum attachment
- Follow the repair material manufacturer's instructions

Also, always wear the following:

- An approved respirator, or air supplied respirator
- Eye protection
- Rubber gloves
- Earplugs
- Protective clothing

The following procedures should be followed when repairing all types of thermoset plastic:

- Follow the manufacturer's application and curing recommendations.
- Do not intermix systems. Use the supplies and the repair materials from the same manufacturer.
- Clean the inner and outer surfaces of the repair area with a soap impregnated scouring pad in order to remove any dirt or mould.
- Clean the area with a wax and grease remover, using only enough of the remover to dampen a cloth. Allow the panel to dry thoroughly.
- Remove the surface finish from the area to be repaired. Adhesives are designed to adhere to the plastic substrate, not the finish.
- Prime the surface before applying the repair material.
- Inspect the rear side of the work area before making repairs in order to avoid possible damage to wires, motors, etc.

Flexible Plastic Part Repair Materials

Flexible Plastic Part Repair Materials			
Thermoset Plastic Type	Type of Repair	Recommended Repair Material	Availability
Most flexible and semi flexible plastic*	Most repairs*	Compoxy Repair Material	Refer to your local paint supplier
		CMR-8 Composite Repair Material	Refer to your local paint supplier
* TPO, TEO, (Polyolefin Plastics) require the application of the adhesive primer before the repair compound is applied.			

Rigid Plastic Part Repair Materials

Rigid Plastic Part Repair Materials

Thermoset Plastic Type	Type of Repair	Recommended Repair Material	Availability
Sheet moulding compound (SMC), RIM rigid plastic parts	Cosmetic filling	Structural Bonding Epoxy	Refer to your local paint supplier
		Sikkens Polystop LP™ or equivalent polyester repair putty	Refer to your local paint supplier
Most rigid plastic parts	Cosmetic repair, adhesive bonding	Structural Bonding Epoxy	Refer to your local paint supplier
Most rigid plastic parts	Adhesive bonding	Structural Bonding Epoxy	Refer to your local paint supplier
Most rigid plastic parts	Adhesive structural* bonding	Structural Bonding Epoxy	Refer to your local paint supplier
Most rigid plastic parts	Adhesive bonding Structural bonding	Structural Bonding Epoxy	Refer to your local paint supplier
SRIM most rigid plastic parts	Cosmetic repair, adhesive bonding	SRIM™ repair kit	Refer to your local paint supplier
* Structural adhesive bonding may require the use of a pneumatic applicator, to speed the application of the epoxy.			Refer to your local paint supplier