

ACCESSORIES & EQUIPMENT

Plastic Panel Information and Repair - Canyon, Colorado

SPECIFICATIONS

FLEXIBLE PLASTIC PART REPAIR MATERIALS

Product- 88861039, *88861040, High Strength Plastic Repair 50 ml

Components- 12 cartridges with 2 mixers each

Structural and Cosmetic

Recommended Repair Material

Product	Components	Recommended Repair Material	Work Time 70°F	Handling Strength at 70°F
88861039 *88861040 High Strength Plastic Repair 50 ml	12 cartridges with 2 mixers each	Structural and cosmetic bonding and repairing of all flexible plastics. Requires GM P/N 12378462 on TPO plastics. Will also bond e-coated/primed metals.	90 seconds	10 minutes

* TPO, TEO, (Polyolefin Plastics) require the application of polyolefin adhesive primer before the GM P/N 88861039 repair compound is applied.

Working Time

Product	Adhesive Sandability at 70°F	Part Paintability at 70°F	Adhesive Full Cure at 70°F	Program
88861039 *88861040 High Strength Plastic Repair 50 ml	20 minutes	30 minutes	24 hours	Bumper covers, emblems, door trims, exterior and interior repairs*

* TPO, TEO, (Polyolefin Plastics) require the application of polyolefin adhesive primer before the GM P/N 88861039 repair compound is applied.

RIGID PLASTIC PART REPAIR MATERIALS

Thermoset Plastic Type	Type of Repair	Recommended Repair Material	Availability
Sheet metal compound (SMC), RIM rigid plastic parts	Cosmetic filling	GM Goodwrench® Structural Bonding Epoxy (GM P/N 12345726 or equivalent)	GM Dealer
		Sikkens Polystop LP™ or equivalent polyester repair putty	Refer to a local paint supplier

Thermoset Plastic Type	Type of Repair	Recommended Repair Material	Availability
Most rigid plastic parts	Cosmetic repair, adhesive bonding	GM Goodwrench® Structural Bonding Epoxy (GM P/N 12345726 or equivalent)	GM Dealer
		Lord Fusor® SMC Body Panel Repair Adhesive or equivalent	Refer to local paint supplier
Most rigid plastic parts	Adhesive bonding	GM Goodwrench® Structural Bonding Epoxy (GM P/N 12345726 or equivalent)	GM Dealer
		Dynatron Dyna-Weld Plio Grip® or equivalent (OE structural adhesive)	Refer to local paint supplier
Most rigid plastic parts	Adhesive structural* bonding	GM Goodwrench® Structural Bonding Epoxy (GM P/N 12345726 or equivalent)	GM Dealer
Most rigid plastic parts	Adhesive bonding Structural bonding	Ashland Pliogrip® 7773B-3-minute Ashland Pliogrip® 7779B-10-minute Ashland Pliogrip® 7770B-35-minute	Supplied by Crest Industries 1-800-822-4100 fax 1-800-344-4461
SRIM most rigid plastic parts	Cosmetic repair, adhesive bonding	GM Goodwrench® SRIM™ repair kit (GM P/N 12378523) or SIA™ Adhesives, INC. SRIM™ repair kit P/N 30208030001 adhesive 200ML TUBES P/N 30208020001 50ML TUBES P/N 30208010001	SIA Adhesives, INC. customer service 1-330-374-2468
* Structural adhesive bonding may require the use of a pneumatic applicator, A8-37479-1A, or equivalent, to speed the application of the GM P/N 12345726 epoxy.			Kent-Moore 1-800-GM-TOOLS

REPAIR INSTRUCTIONS

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 mold release agent.
- 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 a metal 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.

DESCRIPTION AND OPERATION

HOW TO IDENTIFY PLASTIC PARTS

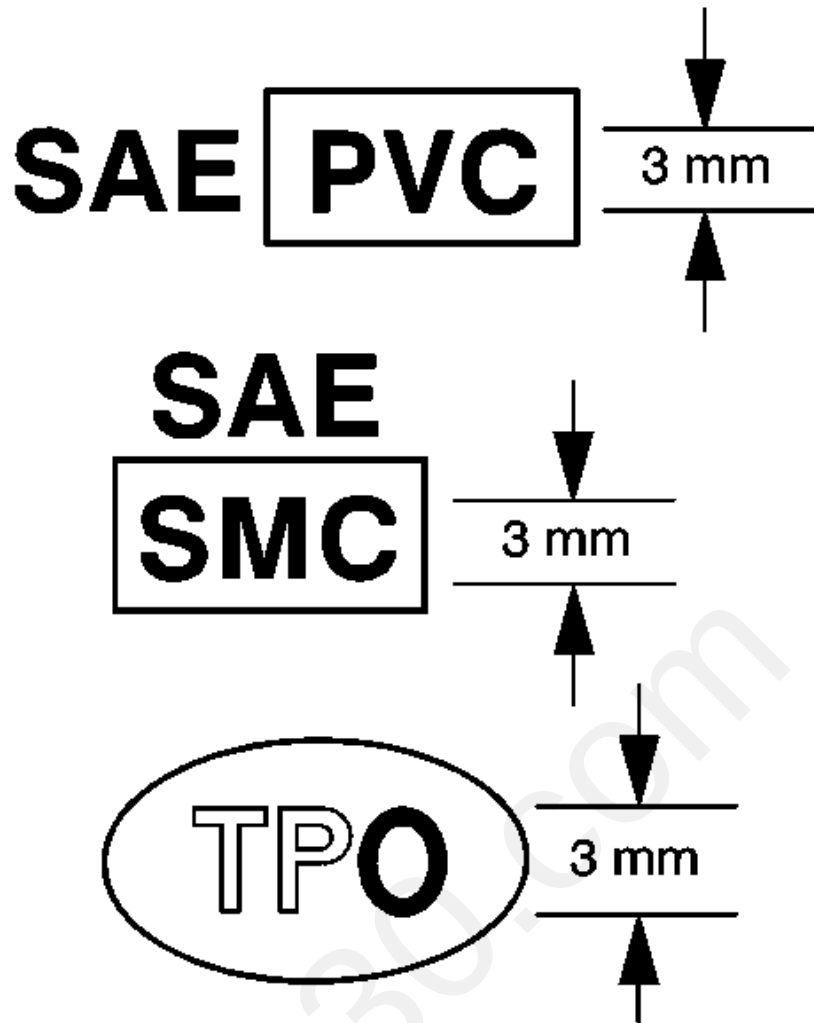


Fig. 1: Identifying SAE Code

Courtesy of GENERAL MOTORS COMPANY

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.

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

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
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The shaving should be free of mold 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

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, IPC, Steering Column Bracket / Jacket, Trim Molding	ABS, Absafil, Magnum, Cycolac, Dyel, Kralastic, Lustran	Thermoplastic
ABS + PC	Acrylonitrile / Butadiene-Styrene + Polycarbonate	Instrument Panel, IPC	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, Misc Soft Trim	Elvax, Microthane	Flexible
PA	Polyamide	Headlamp Bezels, Quarter Panel Extensions, Exterior Finish Trim Panels	Nylon, Capron, Zytel, Rilsan, Minion, Vydyne, Welland	Rigid
PA, PAG, PAGG	Polyamide	Exterior Finish Trim Panel, Headlamp Bezel, Quarter Panel Extension	Capron, Minlon, Nylon, Rilsan, Vydyne, Wellamid, Zytel	Rigid, Thermoset

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
PA + PPE	Polymide + Polyphenylene Ether	Exterior Trim, Fender	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	Fuel Tank Shield, Inner Fender Panel, Interior Trim Panel, Seat Belt Cover, Spoiler, Valance	Alathon, Dylan, Foriflex, Hi-fax, Hosalen, Marlex, Paxon	Rigid, Thermoplastic
PF	Phenol Formaldehyde	Ashtray	Amberol, Bakelite, Durez, Genal, Phenolic, Plyophen, Resinox	Rigid, Thermoset
PP	Polypropylene	Bumper Fascia, Cowl Panel, Deflector Panel, Door Panel, Inner Fender, Interior Molding, Kick Panel, Load Floor, Radiator Shroud, Wheel Cover	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
PS	Polystyrene	Dash Panel, Door Panel	Durathon, Dylan, Lustrex, Polystyrol, Styron	Flexible, Soft
PUR	Polyurethane, Thermoset (Unsaturated)	Bumper Fascia, Filler Panel, Front/Rear Body Panel, Pickup Box	Bayflex, Castethane, RIM, RRIM, SRIM	Thermoset
PVC	Polyvinyl Chloride (Vinyl)	Interior Soft Trim, I/P Skins, Roof Cover	Geon, Pliovic, Unichem, Vinoflex, Vinyl, Vinylite	Flexible, Vinyl
SAN (SA)	Styrene Acrylonitrile	Center Console, Glove Box Door, Interior Trim Panel	Foracryl, Lustran, Tyril	Rigid
TEO (EP, EPM, TPO)	Ethylene / Propylene (Rubber)	Air Dam, Bumper Fascia, Valance Panel	EPI, EPII, TPO, TPR (Thermoplastic Rubber)	Flexible, Thermoplastic

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
TPO	Thermal Plastic Oletin	Bumper Covers	TPO	Flexible Thermoplastic
TPU (TPUR)	Polyurethane, Polyolefin	Bumper Fascia, Gravel Deflector, Soft Filler Panel, Window Molding	Estane, Pellethane, Roylex, Toxin	Flexible, Thermoplastic
UP	Polyester / Thermoset	Air Scoop, Air Spoiler, Fascia Extension, Hood, Instrument Housing, Rear Compartment Lid, Roof, Ventilation Grid	Fiberglass, Premiglass, Selectron, SMC, Vibrinmat	Rigid, Thermoset
For symbols not listed in this table, contact the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001.				